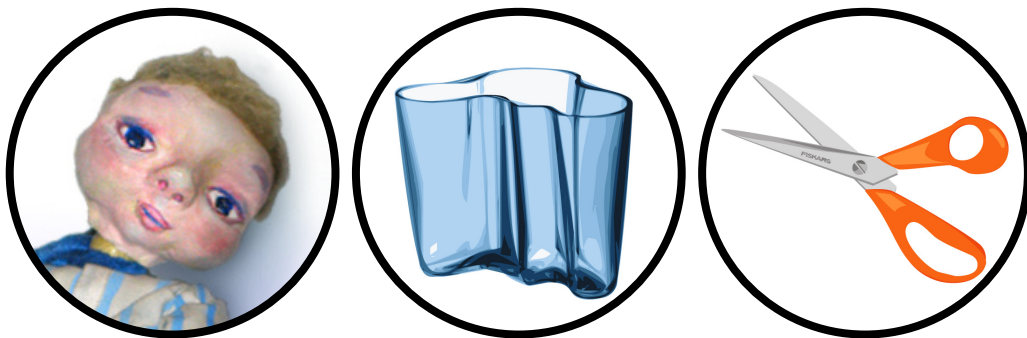


# Oswald and the Objects

improving the access of Finnish daycare centers to Design Museum's educational activities



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Master's Thesis

Aalto University, Department of Media, Media Lab unit

March 15, 2010



<i>Degree programme</i> MA in New Media, Aalto University		<i>Department</i> Department of Media, Media Lab unit	
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<i>Title</i> Oswald and the Objects - improving the access of Finnish daycare centers to Design Museum’s educational activities			
<i>Level</i> Master’s Thesis		<i>Graduation year</i> 2010	<i>Number of pages</i> 95

#### *Abstract*

The Finnish Design Museum currently offers informal educational activities for children at daycares. However, most of these activities happen at the museum's premises in Helsinki and consequently only the daycares in the capital area can benefit from them. The difficulty of taking small children on long distance journeys restricts the access of other daycares.

This thesis describes the process of conceiving and designing an online service – Oswald and the Objects – that addresses the obstacle of distance in the access of daycares to Design Museum's educational activities for children. The service encourages daycares to use social media and social interaction tools such as online forums, video, photo and document sharing services to connect and engage in conversation with the museum's education team and other daycares, sharing their learning experiences, obstacles and suggestions.

The design choices and details of Oswald and the Objects are explained and documented by introducing the current specific needs of its audience, analysis of similar online services in Finland and abroad and by reflection on the experiences gained by tests conducted with an early prototype of the service. The results of the process indicate that by combining social media services, multiple media types and meaningful activities a promising alternative for increasing the reach of museum educational activities can be created. The experiences gained throughout the development of the service and the initial reactions to the final implementations indicate that daycare educators in Finland are receptive to this type of services and recognize its relevance. In order to get the most out of the service, it is important that the background experience and practices of educators in using digital media and online social interaction tools are taken into consideration when planning the several media elements of the service. However, the museum must still contemplate alternative and complementary materials to online media to ensure the access of the largest possible number of daycares to its educational activities.

#### *Materials*

<http://www.esajaesineet.com>

#### *Keywords*

Concept, design, media education, informal learning, museums, digital video, digital media, social media, social networks, user-generated content, online sharing, daycares, project management.



## Acknowledgements

I would like to thank the Media Lab of Aalto University for all the support through the process of completing my MA studies. I am deeply thankful to my supervisors, Andrea Botero and Mariana Salgado, for the commitment, encouragement and guidance in my work, even before it had become my master thesis. Especial thanks to Ilpo Kari for all the assistance and help in several stages of the journey. I am equally grateful to Antti Raike for ensuring I kept focused in graduating and for introducing me to Päivi Raino, who gave me valuable advice regarding video subtitling. Thanks to Tarja Toikka, who guided me into project management in my early days at the Lab. My appreciation goes also to Teemu Leinonen, Tapani Jämsen and Ville Tikkanen for their advice, and to Pekka Salonen, Tommi Jauhiainen, Tuukka Teponoja and Vennu Nivalainen for all the attention spent with the project details.

Oswald and the Objects would have not been possible without the support of AVEK and the collaboration of the Design Museum Helsinki. Thanks to the education team at Design Museum for believing in the project and committing with such effort and passion during these two and half years: Hanna Kappanen, Leena Svinhufvud, Anna Louhelainen, Mirjam Krafft. Thanks also to Peter Vesterbacka and Meri Anna Hulkkonen, from ConnectedDay, for giving us access to their service and being a partner in the project. I am equally in debt to Zipipop's Richard von Kaufmann, Helene Auramo, Tuomas Laitinen and in particular Taro Morimoto, for supporting the development of the project long after the grant money ran out.

I must also express my gratitude to Jyrki Reunamo at Helsinki University, for sharing his experience in design education for children and to all the educators and children who participated in the test sessions at the daycares Onnela, Kamppi and Illusia.

Finally, I am heartily grateful to my mother, Maria Júlia Sousa and my father, João Ramos de Sousa, for their unconditional love and support.



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# 1. Introduction

In modern societies digital media and online social networks are part of everyday life, even at schools. Many educators use digital media materials in their lessons when they find meaningful reasons to do so. Moreover there is a growing demand for quality digital contents in all areas and levels of learning.

Also museums begin to learn how to take advantage of digital environments to expand their educational role within the communities. I believe this is a good opportunity for extending the reach of educational materials produced by museums into classrooms nationwide.

By using the internet to distribute learning resources and online social interaction tools to enable communication it's also possible to reduce the inequality in the access to culture of schools located far from the main cities and cultural centers. The increasingly participatory internet environment can be used to establish a closer connection between museums and schools.

This thesis is an exploration around these same issues, focusing on a particular museum – the Design Museum in Helsinki – and a specific level of education – daycares. It describes the process of conceiving and designing an online service – Oswald and the Objects – that addresses the obstacle of distance in the access of daycares to Design Museum's educational activities for children. The service encourages daycares to use social media and social interaction tools such as online forums, video, photo and document sharing services to connect and engage in conversation with the museum's education team and other daycares, sharing their learning experiences, obstacles and suggestions.

The thesis is divided into a written part and a practical part (a design project). This written part is where I introduce my research questions and discuss the several steps of the project. The design project relates to the service and website of Oswald and the Objects, which is currently being tested as a prototype. That part was done together with several collaborators whom I present a little further ahead. The website can be accessed at:

**<http://www.esajaesineet.com/>**

## 1.1 Goals and research questions

The Finnish Design Museum currently offers informal educational activities for children at daycares. Most of them happen at the museum's premises in Helsinki. While these on-site activities are an essential part of the Design Museum's educational offer, only the daycares located in the surroundings of the museum can benefit from them. Location is a major restriction for the daycares outside Helsinki, since it's difficult to take small children on long distance journeys.

In this MA thesis I address this problem by proposing an online service to improve the access of Finnish daycare centers to the educational activities offered by the Design Museum. I have two main goals:

Goal one is to help Design Museum to create and distribute online resources for informal learning activities which can happen at the daycare centers without necessarily requiring the physical presence of the children at the museum. My objective is to collaborate with Design Museum's education team to build a website where the museum can share the resources with daycare educators.

Goal two is to generate a dialogue between the museum and daycares and between children and educators in different daycares. My objective is that daycare centers share their experiences and the results from the learning activities (such as photos, videos or short stories) with Design Museum and other daycares by using a set of existing social media services and tools.

In doing this I have explored answers to the following research questions:

- What kind of online services can be created to improve the access of daycare centers to museum's educational activities?
- How can social media be integrated in such services, to improve communication between daycares and museums and benefit the whole experience?

I believe that the museum will benefit from receiving the experiences shared by the daycare educators and children for they will give valuable feedback that can be used to develop their education services further. Daycares will benefit from using the service for it gives a meaningful reason to introduce children to activities involving online digital media tools and initiate them in digital media literacy.

Finally I would like to clarify that this work does not deal with the methods and activities of teaching and learning neither do I discuss the value of the museum's learning resources and activities in depth. I do however reflect on the conditions and qualities of the learning

experience as it pertains to the design aspects of the project. This project was done in collaboration with members of the Design Museum's education team, who have focused on the pedagogic aspects.

## 1.2 Collaborators

The practical part of this thesis, the website Oswald and the Objects, is the result of collaboration between members of three different entities:

### *Design Museum*

Design Museum is a specialist museum in Finland that selects and maintains a design collection, does research and documentation in its field, holds exhibitions on design history and contemporary products and produces design education services (Design Museum Helsinki 2007). The pedagogical and cultural value of the educational contents in Oswald and the Objects are guaranteed by this museum. Design Museum's education team included Hanna Kapanen, Mirjam Krafft, Anna Louhelainen, and Leena Svinhufvud.

### *Zipipop*

Zipipop is a company focusing on social media applications and consultancy (Zipipop 2009). This company was responsible for developing Oswald and the Objects' website and the content management system (CMS) behind it. Zipipop's team included Tuomas Laitinen, Taro Morimoto and Diana de Sousa.

### *ConnectedDay*

ConnectedDay is a community site aimed at professional daycare providers, with the goal of increasing parental involvement (ConnectedDay 2009). This company provided their safe web environment for online photo and video sharing between daycares and Design Museum. When we started collaborating ConnectedDay was reaching about 150 kindergartens in Finland. ConnectedDay's team included Meri Anna Hulkkonen and Peter Vesterbacka.

The project has also counted with the support of the Media Lab unit of Aalto University, especially with the assistance of Ilpo Kari in recording, editing and producing some of the videos and DVDs. Media Lab has also provided its video recording equipment and facilities.

## 1.3 Framework of the thesis

The website and the current Oswald and the Objects service have been built as a functional

demo to test and proof our concept. The development of this demo was supported by a grant from AVEK, The Promotion Centre for Audiovisual Culture in Finland (Kopioisto 2009).

Since I initiated the project by proposing its main concept, I also took the role of project manager at Zipipop to coordinate the project development between the three entities. The other appointed team members at Zipipop were Tuomas Laitinen as the art director and web designer and Taro Morimoto as the developer. The responsibility for the pedagogical contents of Oswald and the Objects' demo was given to Design Museum and in particular to Hanna Kapanen, who is both a member of the museum's education team and also a MA student at the Art Education department of TaiK.

As we started to design the web service we realized that we needed a very simple content management system (CMS) for the website since the people responsible for managing those contents at Design Museum had only average internet and computer skills. The CMS that we were planning to use, Drupal, was too complex to customize without the help of a programmer. Drupal was also too complex on the level of its taxonomic structure.

So we extended the framework of this project from simply building a website towards developing a new CMS to better suit the needs of entities such as the Design Museum. Taro and Tuomas defined the concept and its core functionalities. We named this CMS the Zipi Web Builder.

ConnectedDay services frame an important part of the social media aspects of this project, facilitating the communication between the daycares and the Design Museum. ConnectedDay's service allows daycares to share materials resulting from the educational activities (photos, videos, comments, questions and answers) with the museum, in a safe web environment.

Other social media services such as Vimeo, YouTube and Slideshare (which I explain in more detail in chapter 4) are also included in the framework of the online version of Oswald and the Objects.

In relation to schedule, the Oswald and the Objects website was planned and build between January to April 2009, with several minor details and content being added until March 2010 in order to make it ready for a first series of tests. In this testing phase the primary goal was to generally understand how children and educators reacted to the activities and how the communication would flow among the participants when using the combination of Oswald and the Objects' discussion forums and Connected Day's image sharing service. Comprehensive testing of the service has been postponed to a later stage, and will not be included in this thesis.

The core functionalities of Zipi Web Builder CMS were implemented from February to May 2009. It has been under constant development since then. Every improvement to Zipi Web Builder is also reflected on Oswald and the Objects' content management system.

## 1.4 Personal background and motivation

I have a previous degree in Communication Design, completed in 2002. Following this degree I have worked as a graphic and web designer in different new media and advertising agencies.

During the time I have been working as a designer I realized how organizations have been using less print based media in their communications. Printed reports, brochures and other publications are being replaced by digital presentations, websites, podcasts, videocasts.

In 2006, when I applied for the MA programme in New Media, I was particularly interested in the idea of companies starting their own internet TV channels, either for internal or external use. I had watched video lectures released by several universities, for example like the University of California Television (UCTV 2009). Even traditional printed media like Elle fashion magazine had added video to their web presence, hosting the video files in popular and free sites like Veoh (Elle Magazine 2010a) and YouTube (Elle Magazine 2010b). The production and distribution of audiovisual contents was becoming a common practice for organizations other than the traditional TV producers and providers, and audiences were not anymore restricted to subscription based broadband digital TV services supplied by large telecom providers.

In my application to Media Lab I mentioned that I would like to build an internet TV channel for a public institution such as a university, museum or art gallery and this was my motivation for the first year of studies.

When I was starting my second year at Media Lab I volunteered to collaborate in the project The Secret Life of Objects (Salgado et al. 2007). I contributed to the development of the Oswald and the Objects workshops which were part of The Secret Life of Objects and involved online video related to design education. This pointed towards my original goal of exploring the possibilities of a web TV channel for a public institution, since the Finnish Design Museum was also a partner in the project. Even though the web TV channel idea was never realized it was an important activating factor for initiating the concept of Oswald and the Objects. It gave me the idea of using online video for creating a dialogue between the museum and audiences that could not access it in other ways.

When Oswald and the Objects later became an autonomous project I decided to use it

as reflection material for my MA thesis. The learning results that I expected to gain from working on this project were:

- a better understanding of new media and social media
- a better understanding of how social media can be used in educational projects
- a better understanding of how internet and digital media can be tools for distant learning
- to improve my skills as a concept designer of online services involving social media
- to improve my skills as a project manager
- to improve my skills in filming, editing and compressing video for the internet

## 2. Context

In this chapter I briefly expose my reasons for supporting the role of museums in the production of digital education resources for schools. I also review some background projects that influenced the concept and development of Oswald and the Objects.

### 2.1 Usage of media in education at Finnish schools

Audiovisual media has been part of Finnish education since the 1950's. One of the first attempts in media education research in Finland was carried by Helge Miettunen in 1954 when he published his book "Audiovisual popular liberal education" (Audiovisuaalinen kansansivistystyö 1954).

More recently, the Finnish Counsellor of Education Dr. Ritva-Sini Merilampi (2002) has discussed about several aspects of current media literacy and media education of young people in Finland. She gave a special emphasis to the fields of technology and digital media. She also pointed the need for materials that give a meaningful reason for schools to include digital media in the teaching and make teachers and students communicate with others.

Since 2002 several projects have been launched and tested aiming at increasing the digital media competences of both educators and children. Many of these projects are listed at Mediakasvatus website, a portal for professionals working in the field of media education developed by the Finnish Society on Media Education (Mediakasvatusseura 2010).

Media Muffin (in Finnish: Mediamuffinssi) is one of the projects listed there. The project was an initiative of the Ministry of Education aimed at improving the media readiness in children under the age of eight. Media Muffin produced learning materials for media education covering the areas of play, movement, artistic experimentation, expression and exploration by means of films, games and internet. The project also arranged training for teachers and other educators in the implementation of media education (Kupianinen et al. 2008). It started in 2006 and on the internet I found a website that documented the project until early 2008 (Mediamuffinssi 2008).

Currently Media Muffin has no website and there is little information about it. Despite this fact I decided to mention it here as a background reference for our own project Oswald and the Objects, since Media Muffin was aimed at pre-school children and made use of the internet as a media. Oswald and the Objects shares this starting point. However, it also attempts to include museums and their collections as part of the content material.

## 2.2 The educational role of Museums

The International Council of Museums (ICOM) defines a Museum as:

*“(...) a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment”.* (ICOM 2007)

In the context of modern societies, Museums are long established sources of reliable and understandable information. According to the American researchers Falk and Dierking (2000), learning is the main reason people go to museums, which are considered to be part of the national educational infrastructure, alongside with schools, libraries, print media, broadcast media and nowadays, the internet. Moreover people also go there in seek of pleasure and enjoyment. So Museums meet *“the public’s desire for knowledge and meaning making”* by presenting them ideas *“in enjoyable and comprehensible experiential formats”* as stated by Falk and Dierking (2000, p.2).

For this thesis I will highlight education and enjoyment as two of the main purposes of Museums. These purposes are fulfilled by holding exhibitions, with publications, workshops and activities, some of them targeted at special visitor groups such as families and schools.

Workshops and activities are current practices in most museums and they mostly happen at the museums’ premises. But nowadays museums also have many virtual visitors to their websites, some of whom will never be able to visit the museum in person. According to Hawkey’s study (2004), in the United Kingdom the number of virtual visitors in some museums has already exceeded the physical ones. The growth of virtual visits has been paired and encouraged with an increasing amount of information and resources being added to museum’s websites. Some of those are learning resources targeting schools, allowing the museums to enter classrooms nationwide. It is mainly on those online educational resources that I will focus my benchmarking research for the Oswald and the Objects project.

## 2.3 The Oswald and the Objects pilot workshops

In the autumn of 2007 researchers and students from the Media Lab of the University of Art and Design (now Aalto University) and members of the education team of Design Museum Helsinki decided to collaborate on a project called The Secret Life of Objects. The project aimed at finding new ways to discuss design objects with different groups of visitors, using several types of media and was documented on its own blog (Salgado et al. 2007).



From Media Lab the project was coordinated by Mariana Salgado and supported by Andrea Botero and Diana de Sousa. We investigated ways to design for participation in museums and what results to expect from that participation (Salgado et al. 2008). Under this research several workshops were organized at the museum with teenagers and children. A selection of design objects were explored through music, poetry, photography and drawing. Audio-visual materials gathered during the workshops were integrated in an online interactive map of the museums' permanent collection, also displayed at the museum's permanent exhibition during the Spring of 2008. Visitors were invited to browse the map and write their own comments. With the interactive map Salgado (2009a) explored the usage of online maps in adding community-generated content to the museum.

The education team from Design Museum was particularly focused on finding new methods to discuss design objects with five year-old children, introducing them at the same time to digital media tools. Together we produced a pilot workshop format intended to happen at the daycare centers' premises and to be conducted by the museum's educators. It included a series of five different workshops about five different design objects. All objects were part of Design Museum's permanent collection. This workshop series for children was named Oswald and the Objects.



**Figure 1 - Anna Louhelainen and Mirjam Krafft performing the puppet Oswald's dream about a family of scissor-birds.**



**Figure 2 - The museum educators discussing with children about the history of scissors.**

Each workshop started with the children watching a puppet show in which the puppet Oswald dreamt about a mysterious object. After watching the show the children were invited to discuss about that theme object in the context of their daily experiences. They were also given a context for the object inside the discourse of Finnish design history.

Following the discussion the children were guided into several activities where they could create new objects or new contexts for the object. They could also use digital cameras to take pictures of their works. The museum educators also asked children to briefly tell stories about their works to a webcam mounted on a computer. Some of the stories were later included in the interactive map I previously mentioned.

I initially joined the project as a volunteer



**Figure 3 - Children using cardboard to create their family of scissors.**



**Figure 4 - A child telling stories to a webcam about her scissors "Pöpö".**

to film the workshops for the project's documentation purposes. At that stage I was very interested in internet television and I was thinking that those video materials could also be the starting point for a web TV channel for the Design Museum – my initial idea for my MA thesis, which didn't develop further. However, some of the videos were shown at the museum as part of the exhibition *The Secret Life Of Objects*, an Interactive Map of Finnish Design from March to June 2008. They were also hosted at Design Museum's channel in YouTube (Design Museum Helsinki 2008a), which we created especially for the occasion. The video about Oswald and Fiskars scissors (Design Museum Helsinki 2008b), for example, gives a good overview of these series of workshops.

The results achieved with the pilot workshops were clearly positive, and we started to think of ways to extend the new teaching methods to a larger number of daycare centers. One restriction was that the museum educators could not spend too much time traveling to daycares far from Design Museum; also daycares were not able to bring the children to the Museum if they needed to travel for a long time. As a result we concluded that only a small number of daycare centers would benefit from the workshops: those located in the surroundings of the Museum, in Helsinki.

## 3. Benchmarking and concept development

In this chapter I address the development of the concept of an online version of the Oswald and the Objects' workshops. I analyze and identify the best practises of several online educative services from museums and similar entities in Finland and abroad, and I exemplify how other museums are using social media channels. I present my interpretation of a background survey conducted to determine the potential interest of daycare educators in an online service for design education. I also expose the results from tests made to validate the Oswald and the Objects draft concept.

### 3.1 The draft concept

To minimize the obstacle of physical distance in accessing Design Museum educational workshops I proposed a solution that involved using a variety of digital tools. The workshops could still happen at the daycare centers if their educators could take the role of the museums' educators in leading the activities. They just needed enough information and guidelines on how to do it. I assumed that in most daycares there would be at least one computer with internet connection (even if it would be mainly used for administrative purposes). If so, we could have a video replacing the live puppet show and children could watch it online. The guidelines for the daycare educators could be downloaded from a website. This way it seemed possible to reach many daycares, regardless of their physical location. The museum education team agreed with the idea and we began to research the possibilities of also using social media tools in the project to improve the communication between the museum and the daycares.

### 3.2 Benchmarking online educational materials

To develop the concept of Oswald and the Objects I needed to have a general idea about the education materials that other museums were producing, and where and how educators and students could access them. I was curious to know, for example: are all the materials online or do some have to be mail-ordered from the museum? Are they using online video? Are the videos online? Can they be downloaded? Are there any printable contents? How is the information structured, by theme or school year? Are documents presented through online file-sharing services or are they hosted in the museum's servers?

I also wanted to know what tools for feedback collection and participation the museums

had for the educators and children, or if they didn't have any at all: for example discussion forums, options to comment on photos, email addresses where to send feedback to.

Moreover, I was trying to find out if the materials could be used by educators in the classroom without the need of physically visiting the museums, for example, to teach a lesson or simply to guide children through an activity. Most of the materials that I knew beforehand were meant to be used in classroom, either before a visit (for example, to prepare for the most relevant experiences) or after a visit (to evaluate the acquired knowledge).

To answer these questions I analyzed a number of museums' websites, in Finland and abroad. I did not restrict the benchmarking to museums with a specific focus on Design since the theme area was not so important at this stage. The research was also narrowed to the educational resources that are publicly available online, since the public online environment was the precondition which I wanted to explore. Furthermore I did not analyze the pedagogic value of the contents since that is not in the aim of this thesis.

### 3.2.1 Materials from museums in Finland

I analyzed twenty-two Finnish museums' websites. For the ones that didn't have a full English version I translated the Finnish webpages into English by using Google translation tools. From all the analyzed websites, eight had relevant information. They were:

#### ***Ateneum Art Museum***

*Ateneum for schools* (Ateneum 2009a). Ateneum Art Museum is the national gallery of Finland, presenting the most important art collections in Finland.

#### ***Helsinki City Museum***

*City Museum website* (Helsinki City Museum 2009a). Helsinki City Museum records and upholds the cultural and material heritage of the Helsinki area.

#### ***Heureka Science Centre***

*Heureka learning centre website* (Heureka 2009a). Heureka is the permanent exhibition hall in Finland for the presentation and discovery of science.

#### ***Museum of Contemporary Art Kiasma***

*Kiasma school's website* (Kiasma 2010). Kiasma is the Finnish museum for contemporary art.

#### ***Museum of Cultures***

*Museum education pages* (Museum of Cultures 2010a) and the *Children's pages* (Museum of Cultures 2010b). The National Board of Antiquities preserves Finland's archaeological sites,

built heritage, cultural-historically valuable environments and cultural property.

### ***National Museum of Finland***

*Children's activities pages* (National Museum of Finland 2009). The National Museum of Finland presents Finnish life from prehistoric times to the present.

### ***Museum of Technology***

*School's pages* (Museum of Technology 2006). The Museum of technology presents a comprehensive history of technology and technologies in Finland

### ***Sami Museum***

*Children's pages* (Sami Museum 2002a). The Sami Museum presents cultural and nature exhibitions on the Sámi culture and nature of Northern Lapland.

The most common type of materials I found on these websites were downloadable and printable questionnaires for students, as well as activity guidelines for educators about topics related to each museums' theme. Some webpages supported the guidelines with additional text and photos about a certain topic.

The materials were targeted at primary and secondary schools, junior high schools and high schools, as well as vocational schools. None of the museums had materials specifically targeted at daycare centers (although some museums offered special tours or workshops for daycares happening at the museum's facilities).

Ateneum Art Museum and Heureka's websites were very good in content organization. For example, the clearly stated information about the targeted school groups for each set of learning materials. But many websites had no indication at all for which school grades their learning materials were aimed at.

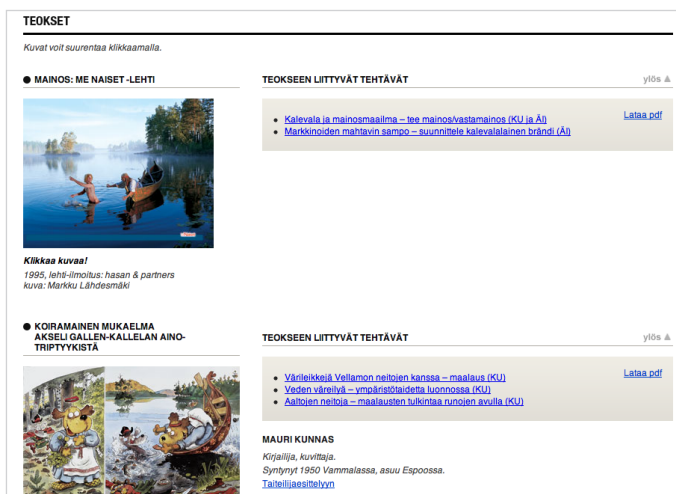


Figure 5 - The Ateneum's pages for schools were very clear and well organized.

The Sami Museum stood out for diversity and originality of contents. In their web pages they had recipes for making simple traditional food and drinks, guidelines for craft works and traditional group games. They also asked children to send their drawings and stories about given topics, so that they could be exhibited on the webpages - and they did have some being exhibited when I visited their website in November 2009 (Sami Museum 2002b). With the exception of Heureka, which was hosting a competition for school students (Heureka 2009b), none of the other museums asked for works to be sent back to them. And only some gave an email contact for feedback or suggestions.



Figure 6 - The Sami Museum hosted an exhibition of drawings sent by children.

In the National Museum of Finland's website there were a few printable board games and riddles for students to guess. Helsinki City Museums presented some craft activities suggestions and traditional children's group games (Helsinki City Museum 2009b, 2009c).

The Ateneum referred to collaboration with the University of Art and Design Helsinki and Helsinki University professors and students for producing their online materials for schools about the Kalevala (Ateneum 2009b). The National Museum of Finland mentioned collaboration from the 4th grade children from Pikku Huopalahti in the making of their children's webpages.

None of the websites had video materials, although at Heureka Science Center was mentioned that a DVD with videos could be ordered and bought from the museum. Also, none of the museums was using social media tools or resources like file-sharing sites with their learning materials.

In all the museums the learning contents were integrated in the museum website, under a



specific link indicating a learning area or materials for schools, for children or educators. Some of these areas linked to a specific mini-site with further contents, or to downloadable PDF files.

### 3.2.2 Materials from museums abroad

As a comparison, I also visited a small number of museum websites in other countries than Finland. I choose museums in English speaking countries (USA, Australia and Canada). All of them had been selected for using social media in new and original ways (Alexander 2008, Owen 2008, Powerhouse 2007). They are:

#### ***Exploratorium (USA)***

*Science snacks* (Exploratorium 2009a), *Educator digital assets* (Exploratorium 2009b), *AfterSchool activities* (Exploratorium 2010a), *Explo.TV* (Exploratorium 2010b) and the *Exploratorium Blogs* (Exploratorium 2010c). The Exploratorium is a museum of science, art and human perception.

#### ***Powerhouse Museum (Australia)***

*Australian designers at work* (Powerhouse 2004) and *Play at the Powerhouse Museum* (Powerhouse 2009). The Powerhouse Museum has a diverse collection of objects in the areas of history, science, technology, design, industry, decorative arts, music, transport and space exploration.

#### ***Ontario Science Centre (Canada)***

*Programs for kindergarten to grade 3* (Ontario Science Centre 2010). The Ontario Science Center offers exhibitions and interactive experiences on science and technology.

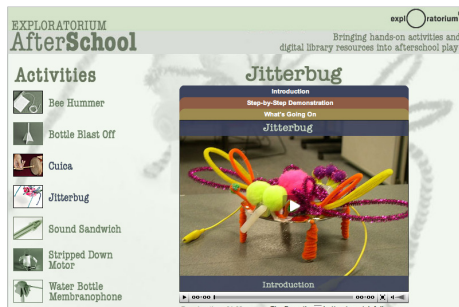
#### ***Tate (UK)***

*Tate on iTunes U* (Tate 2010a). The Tate is a family of four art galleries housing the UK's collection of British art from 1500 and of international modern art.

In general all these museums had a larger collection of online educational resources compared to the Finnish ones. They were better organized and visually more appealing. This shows that those museums have been investing in their online educational resources for a longer period of time, as they probably have more resources devoted to this field than the Finnish museums.

Most of the online materials I found were aimed at primary to intermediate schools and high schools. Materials specifically for daycares were very scarce - again, the programs targeting daycares were mostly workshops happening at the museum facilities.

The type of educational resources did not differ so much from the ones I found in Finland, except that these museums used video more. The most common materials were the same as in Finland: questionnaires and lesson presentations available to download and print, online games and suggestions for craft activities.



**Figure 7 - The Exploratorium uses video as a resource in its digital libraries for children.**

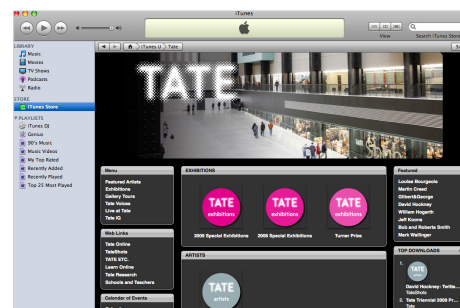
The Exploratorium had the most diverse type of contents, from guidelines on how to reproduce museum exhibitions at a small scale in the classrooms, science related activities to be done after class or at home supported by video materials as well and printable guidelines (Exploratorium 2009a, 2010a). They also gave a wide variety of links to free online video libraries to support further learning, for example the Research Channel, which was

founded by several American research and academic institutions who wish to share the results of their research works with the public (Exploratorium 2009b). Another interesting feature at some of the Exploratorium pages was a one-click email button to recommend the activity to a friend, which encourages spreading the word about these resources.

At the Powerhouse I found an interesting mini-website dedicated to the several design related professions and to what kind of work designers do (Powerhouse 2004). This website provided educators with lesson materials that enable them to guide their students through learning about design and design processes, as well as suggestions for hands-on activities to be done in the classes. Most of the materials were online, not downloadable. They were complemented with online sound clips and links to other online resources. The Powerhouse museum also has a game and crafts area with contents that can be used independently of a visit to the museum. These could be suitable for daycares, with step by step guidelines and using materials commonly found at homes (Powerhouse 2009).

On the Tate website the most interesting feature was not under the area dedicated to schools and teachers but rather in the area for general online learning. Tate was using the iTunes U store to share educational materials with teachers, for free (Tate 2010a).

The Ontario Science Centre had a very detailed list of how their workshop



**Figure 8 - Tate's educational resources can be downloaded from the iTunes U store for free.**



programs connected with the school curricula of the several school levels (Ontario Science Centre 2010).

None of these museums used social interaction tools on their webpages directed at schools. None of them asked the schools to share any of their findings and learnings with the museum educators or with other schools, at least not publicly. However, all these museums use social media for communicating with the general audience. For example the Exploratorium provides video webcasts (Exploratorium 2010b) and blog communities (Exploratorium 2010c). I will address the use of social media in museums a bit further ahead.

### 3.2.3 Materials from the PBS TV channel

Another interesting finding was the online version of the North American Public Broadcasting Service (PBS) television programs Design Squad (WGBH 2009a) and DragonFlyTV (Twin Cities Public Television 2006a). They are relevant for this benchmarking because their websites provide plenty of learning and activity materials that can be used by educators at schools or by the children at home.

The Design Squad TV show comprehends a two day workshop where teams of teenagers work on a project from concept to prototyping. It always involves building a gadget or vehicle. The series is not a sole product of PBS. It is also supported by a number of collaborating institutions like professional engineer associations, museums, universities and educational foundations.



**Figure 9 - Design Squad uses fun and fast paced videos to illustrate their activities.**

One of the most positive aspects of Design Squad is the way they use videos to show how the building and learning process develops in each project. The videos are edited in a exciting fast pace, focusing as much in the technical parts as in the emotional voyage of participating in the workshops (WGBH 2009b). They pass on the message that the activities are fun, which is a powerful motivating factor for educators and children who wish to do

similar tasks at their homes or school. In fact, the website provides guidelines for similar but simpler tasks (WGBH 2009c). They can be found under a link for parents and educators.

Design Squad also encourages active participation and exchange from the audience. One way is by organizing competitions in which the winner project is featured on the website. Another way is by challenging children to submit their own design ideas and wishes about

projects through the website. They will later be shown online for other children to see and rate them (WGBH 2009d).

The other PBS project which has an online version aimed at younger children (age 9 to 12) is DragonflyTV. This one focuses on science and scientific discovery. Dragonfly's website provides plenty of activity guidelines for educators as well as guidelines for simple activities that children can do by themselves at home. Like in Design Squad, many suggested activities come with a video to show how the activity can be completed. All their videos are professionally filmed and edited.

The most interesting findings from DragonflyTV website were the simple multiple choice vote polls to collect feedback from the activities proposed on the website and the several message boards also related to these activities. This way Dragonfly TV viewers can share their findings and question each other. For example the Foam tower discussion board (Twin Cities Public Television 2006b), like all the message boards I visited, seemed quite popular and had many posts and replies reporting the children's observations about the proposed activities.

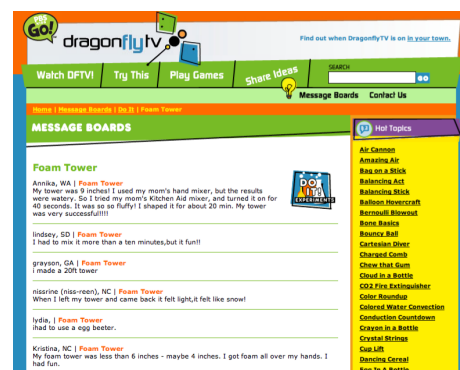


Figure 10 - Dragonfly TV has message boards related to their proposed activities.

After analyzing these two websites I gained very good references to later plan the video contents and the discussion forums in Oswald and the Objects.

### 3.2.4 Best practices

From all the websites and services that I analyzed I have reached some conclusions and selected the best practices to take into consideration when exploring answers to my initial research questions. They are:

- Videos are important to show the “making” of the activities and motivate others to do similar things.
- Videos are also important to show things that cannot be experienced live, like scientific experiments that can easily be made at a science museum but difficult to reproduce at a classroom, because of lack of space or materials.
- When social interaction tools like comment boxes, discussion forums or feedback forms are available, the audience tends to use them, for example, for sharing opinions or report and discuss about their experiences and findings.

- Competitions can be a good motivating factor for participating in the activities, even if the prize is just a virtual exhibition of the winning entries and merit attribution to the authors.
- Educational materials can include links to other related online resources which don't necessarily belong to the same institution.
- It's important to join efforts to enhance the production of educational materials. Some museums are producing them collaboratively with other educational or professional institutions.
- It's important to define the target audiences. Some educational materials state clearly to which age group or school grade they are intended for and how they are integrated in the school curriculum objectives. When the materials are well organized and visually interesting the educators might be more likely to use them.
- When the website is well organized and visually interesting the visitor is also more motivated to explore it.

### 3.3 Museums and social media

The term "social media" refers to the (usually) free information distribution channels available on the internet and accessible to any internet user. They result from the development of a second generation of web services that follow a set of principles and practices identified by Tim O'Reilly (2005): they enable user self-service, decentralize service providers and explore collective intelligence.

There are several forms of social media and all share similar affordances. These affordances, as described by Mayfield (2008), are: openness (contribution from the audience is encouraged), participation (voting, commenting, sharing information), conversation (two-way communication, opposed to one-way broadcasting), community building (around shared interests) and connectedness (offering ways to link to other websites, resources and people). Mayfield (2008, pp.6) also describes the basic forms of social media:

**Social networks:** Sites where people can build personal web pages, connect with others and share contents. The social networking website Six Degrees, launched in 1997, was the pioneer in this kind of services but it failed to attract massive adoption and it closed by the year 2000. Similar networks followed, some more oriented towards the business and professional world like LinkedIn (LinkedIn 2009).

**Blogs:** Online journals, where the most recent entries appear first. Blogger (Blogger 2009) is among the most popular blogging services at this time.

**Microblogs:** Services like Twitter (Twitter 2009) or Qaiku (Qaiku 2009), which combine

social networking with small-sized blogging, also known as “status messages”. Updates to status messages can be distributed online and through mobile phones network.

**Wikis:** Communal databases where documents can be edited by many people. The best known wiki is Wikipedia, an online encyclopedia (Wikipedia 2009).

**Podcasts:** Audio and video files available by subscription, for example like in the BBC online podcast service (British Broadcasting Corporation 2009).

**Forums:** Spaces for online discussion around shared interests or topics, for example like the ones offered by the information technology company Dell (Dell 2008).

**Content communities:** Spaces for sharing specific kinds of content like music, video, photos, links or presentations. MySpace (MySpace 2009) is one of the most popular music sharing sites at the moment. YouTube (YouTube 2009) is presently the largest video sharing site and Flickr (Flickr 2009) allows to share both photos and videos.

Organizations such as museums can also participate in social media. By using social media tools museums can connect with people and easily keep in touch with them, in a more personal way than traditional advertising, email and newsletters used to allow.

Many museums have already started to show interest in this new way of communication. For example, in the UK Design Museum London created a profile in the social network Facebook (Design Museum London 2009a). People can connect with this page and recommend it to their friends. The museum posts pictures, video interviews and short news about events and exhibitions, allowing people to comment on them and also share them with friends. Design Museum also created public groups in Flickr, allowing everyone to contribute their pictures, as long as they accept the theme and rules decided by the Museum (Design Museum London 2009b). From the Design Museum website it's also possible to access podcasts (Design Museum London 2006) and RSS feeds (Design Museum London 2009c) for various museum related information.

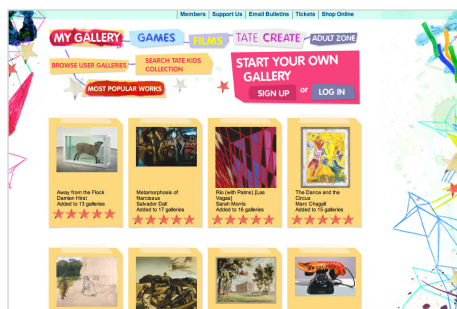


Figure 11 - “My Gallery”, from Tate’s website.

Podcasts and video webcasts are also available from Tate through their Channel (Tate 2010b). In their special area for kids, Tate has launched several initiatives where they request the participation of children. One of them is My Gallery (Tate 2010c). Tate invites children to make they own art gallery by choosing their favorite artworks from pictures of the galleries’ collection.

The children can also send in their own artwork and share it with others, rate other's works and write comments. Another good example of participation is Tate Tales (Tate 2010d). In there children can write full stories about artworks selected by the museum. They can also read other children's stories.

One more example comes from the New York Museum of Modern Art, MoMa. They have a YouTube channel (MoMa 2009) where they post short videos about upcoming exhibitions or artists' bios. In addition to that MoMa is also participating in Art Babble, a collective network for art museums to showcase video art content in high quality format from various sources and perspectives (ArtBabble 2009).

Design Museum London, the Tate and MoMa are just three examples on how social media networks can be used as marketing (or communication) spaces alternative to traditional media. They are less intrusive, more personal and meaningful for the target audiences since people choose to join them instead of being forced to listen; and they are definitely cheaper for the institutions since these distribution channels (the online social networks) are free of charge, unlike newspapers, magazines or television where media space has to be bought.

Some of the reasons for museums to participate in social networks can be to capture new audiences and increase visitors traffic to their main website, which could also translate into more visitors to the physical space of the museum (Alexander et al., 2008). It's also a great opportunity to gain more loyalty from museum's regular audience and to be more present in their daily lives in a friendly way.

But despite this active use of social media and social interaction tools to connect with the general audiences, I found that the museums I analyzed in my benchmarking are not using social media in their online services directed at schools, at least not in a public or visible way. For example, even though Tate is using blogs and social interaction tools in the Kids area, they don't use it in the area dedicated for schools and teachers.

I believe that if museums would target specific groups in the field of education through the same social media networks that they use when addressing to their general audience, they would be likely to collect similar benefits. If they would target teachers in social networks there is a higher probability that their online educational materials would be used more often and in more classrooms. In the same way they could target students and let social networks be a valuable tool to increase the youth's interests for their specific areas as well as fostering new audiences for future years.

*"Museums must begin to see their online presence as a way to involve and interact with visitors (...) in order to facilitate meaningful and lasting educative experiences."* (Crow & Din 2009). In accordance with Crow & Din's claims, the increasingly participatory internet

environment social networks are also a great opportunity for museums to connect to smaller communities of learners and visitor niches who are already familiar with the participatory culture. By following a learner-centric (constructivist) approach, the museums could value this background experience of their audience to enhance their learning experiences (Crow & Din 2009, pp. 2-11). The insight offered by these two authors was of great importance to plan the integration of social interaction tools in Oswald and the Objects. We tried to choose services and methods that were already being used by the daycare educators and familiar to the children, in an attempt to take advantage of their previous knowledge and experience.

### 3.4 A survey to daycare educators

Design Museum conducted a survey (see Appendix A) to daycares in the region of Helsinki in order to ascertain their interest in a service such as Oswald and the Objects. The survey was carried out by phone interviews with 54 daycare educators, in Finnish. Most of the daycares had experience of using the photo and video sharing services of ConnectedDay (ConnectedDay 2009), but not all were still using it at the time of the interview. The daycares did not receive information about Oswald and the Objects beforehand, but the interviewers explained the main idea and features of the service during the interview.

The purpose of this questionnaire was to serve as a guiding tool for future development of the service. I follow present the answer results and extract some conclusions.

- When asked if the children have access to a computer with internet at the daycare, even if only at the administrative office, the majority of educators (28) answered “yes”. 12 educators answered “no”. 5 educators answered that “maybe” the children could access the internet. They were not certain about this possibility because they were not sure if children would be interested in accessing the internet, or they were not sure of having an educator available to access internet with them. 9 educators did not give an answer.
- When educators were asked whether they have used online materials or visited websites at the daycare with the children, the majority of educators (31) answered “no”. 20 educators answered positively, and most of these mentioned they had a good experience when using online materials, mostly photos and images. 3 educators didn’t give an answer.
- When asked if the activities and contexts proposed by Oswald and the Objects were interesting, the large majority of educators (46) answered “yes”. 6 educators answered “maybe” because they were not sure if children would be interested about design or because they feared that they wouldn’t have enough time to work on the subjects with the children. 2 educators didn’t give an answer. There were no negative answers.
- When educators were asked whether they would share images of the activities with

the museum and other daycares by using the ConnectedDay services, a small majority (19) answered “yes”. A slightly lower number of educators (17) answered “no”. These educators mentioned that either they didn’t have the time or the resources to do it, or they didn’t agree with sharing images of the children. Some daycares mentioned they didn’t use ConnectedDay anymore. 16 educators answered “maybe”. They considered doing it if they had the time, if it was not too complicated and if the parents allowed the images to be shared. 2 educators didn’t give an answer.

- When asked if they would use the discussion forums for debating with the museum and other daycares, the majority (24) answered that “maybe” they would do it if they had the time and if the comments didn’t need to be long. 14 educators declared “no”. The main reason for this was lack of time, and some didn’t think debating was interesting enough. 13 educators answered “yes” and most of these were excited about the idea. 3 educators didn’t give an answer.
- Finally, when asked about whether the idea of Design Museum having a website directed at daycares was a good thing, the large majority (44) answered “yes”. 2 educators answered “maybe” without giving a specific reason for their indecision. There were no negative answers.

After I analyzed the answers to the survey I concluded that daycare educators are in general receptive to a service like Oswald and the Objects and they show interest in testing it. The major factor restricting the use of the service would be lack of time, since the daycares have very busy schedules and many suffer from lack of staff. However, many who mentioned lack of time also stated their willingness to try the service, at least. One daycare mentioned that they didn’t have much interest in the original service of ConnectedDay, but if the purpose would be to share pictures of the children’s works with the museum and other daycares, then it could be interesting. This was a very interesting answer, as it confirmed that educators are more susceptible to use media technologies in their teaching when given meaningful reasons.

About one fourth of the daycares declared they don’t have any computer with internet connection that could be used by the children. This is still a significant number. However, given the actual trend of crescent use of information technologies I believe that in a near future the large majority will have computers dedicated for the children’s use, with an internet connection.

### 3.5 Validation of concept

During June and September of 2008 the education team of Design Museum and me performed the first test sessions of the online concept of Oswald and the Objects. We tested the concept with only two of the activities, one related to Fiskars scissors and the other about



the Aalto vase. For this test we provided educators with videos about puppet Oswald and the theme objects (hosted in YouTube) and a digital document with guidelines about the activities and tasks. This document could be downloaded from Design Museum's website.

We tested the concept of this service at two daycares, one in Vantaa and another in Kamppi. The Kamppi daycare only did the Aalto activity but in Vantaa they did both Fiskars and Aalto. The daycare in Vantaa was already using digital technologies in their daily activities with the children (media education was part of their education plan) and they had computers with internet access that children could normally use in their activity room. The daycare in Kamppi did not have any specific media education plan and the only computer with internet access was in the educators' area. Hanna and myself were present during the tests to document the process in video, photos and hand-written notes. In the end of the workshop we also interviewed the educators to collect their feelings and thoughts about the experience.

The test activities were made during the morning period by the educators and children. At both daycares they accessed the videos and watched them in full screen and with sound successfully. As we observed, the children enjoyed the experience and they understood the stories. The discussion between children and educators also went well. The daycare at Vantaa didn't have the Fiskars scissors but they had similar models which they used as sample objects. None of the daycares had the Aalto vase but the museum lent them one. In one of the daycares the educator kept the guideline document with him throughout the entire workshop, to make sure he didn't forget any important fact. From this we concluded that the document should be provided in a printer friendly format. Also, the museum is considering sending by post mail a package with the theme design objects in case the daycares don't own any.



**Figure 12 - Fiskars scissors (Olof Bäckström, 1967).**

Orange Fiskars scissors are a Finnish design classic. Fiskars is the oldest company in Finland working with tools, cutting and steel forging.



**Figure 13 - Aalto vase (Alvar Aalto, 1936).**

Also known as Savoy vase, it's an icon of Finnish design. It was presented at the World's Fair in Paris in 1937.





**Figure 14 - Test at a daycare.**

While there was no computers dedicated for the children's use they were still able to access the website at the educators' room.



**Figure 15 - Test at a daycare.**

The daycare educator and children discuss about the history of the Aalto vase.



**Figure 16 - Test at a daycare.**

After completing a drawing task about the Aalto vase the children show their works to each other and tell the stories that inspired them.

Children enjoyed creating their own objects and contexts for the objects. They used materials available at the daycare: scissors, paper and colored paper, color pens, fabric. The children took about two hours for completing the activities at the daycare, while in the original workshops of 2007 they took only one hour. I think this is due to the fact that children feel more relaxed with their regular educators as opposed to 2007 when the workshops were led by the museum educators, who were strangers to the children. The delay happened at both daycares and with both activities, as educators didn't want to rush the children. Because of this there was no time to complete everything before the lunch break, and we couldn't test the phases of taking and sharing pictures with the museum nor the discussion about works of children from other daycares.

One educator suggested that the activity should be divided into two parts: the first part would start with watching the video and would end with the children telling stories and discussing about the works between themselves. The second part would be about taking and sharing pictures of their works and discussing about the works made at other daycares. Each part could happen in a different day. The educator felt that both parts were valid and interesting proposals but there was no time to complete everything in one day.

Another educator also suggested that the guide documents could offer more detailed information about design history and point out the most important themes to be discussed during the educational activities. Design was not his field of expertise and he didn't feel confident to explain it to children without additional support.

Both educators declared that they would like to do similar activities in the future and there was a need for this kind of resources. One of them advised us to contact the office of Daycare Centers in Finnish cities to raise awareness about the project. This is now in the plans of Design Museum.

### **3.6 Summary of benchmarking and concept development**

Digital media is already a part of the daily routines at Finnish schools. But there is still plenty of space for improvement in what relates to contents and materials that give a meaningful reason for educators to use digital media in their teaching - especially at daycares. From the list presented at Mediakasvatus website I found only one project – Media Muffin – which has done an earlier attempt of bringing digital media into the classrooms of daycares in Finland. However it was difficult to draw conclusions from that project since it already ended and it left very little information available.

On the other hand, regarding museums as producers of educational resources for schools I found that very few of them provide lesson or activity materials that can be used in the classrooms without assuming that the students will make (or have made) a visit to the physical space of the museum. Educational resources that can be used by daycares without that assumption are even fewer. There are however some games that can be played online.

Also, none of the museums' websites that I analyzed used social media or participative tools in their educational programs for schools, although some of the foreign museums used them for communicating with the general audience or in other children's pages. Only the Tate and the North American Public Broadcasting Service (PBS) made a meaningful use of social media tools related to education: Tate had areas where children commented, wrote and shared stories about works selected from the museum's collection, and PBS had discussion forums where children wrote about their experiences and read or commented about other children's experiences. There was a good number of posts and replies in the forums, as children shared their experiences around the same subject.

Audiovisual media is in the same way absent from the online educational materials produced by Finnish museums. Only materials produced by the foreign museums included online video or audio files. Sharing and discussing were not popular also. Very few museums asked educators or children to share the works resulting from the usage of the museum's educational resources online and publicly, or at least among each other.

However, from analyzing the survey to daycare educators conducted by Design Museum I found that many daycares have sufficient technology resources and are receptive to this

kind of activities. The first series of tests done in June and September of 2008 confirmed our expectations. The feedback from the daycare educators was overall positive, and the improvements that they suggested demonstrate their interest in our project. This benchmarking, done in parallel with the concept development, was the base for planning and building the website of Oswald and the Objects, which I describe in the following chapter.

## 4. Service Proposal: Oswald and the Objects online

In this chapter I present an overview of the Oswald and the Objects online service and identify how it differs from other museums' online educational services. I describe how each key element is used and how it influences the service experience. I list the necessary requirements to use the service, ponder the risk of daycares not being able to meet those requirements and propose possible alternatives. I suggest a plan to test the service and finally I also address copyright and privacy concerns.

### 4.1 Overview

The online version of Oswald and the Objects (in Finnish, Esa ja Esineet) is where I explore possible answers to my initial research questions: *“What kind of online services can be created to improve the access of daycare centers to museum’s educational activities?”* and *“How can social media be integrated in such services, to improve communication between daycares and museums and benefit the whole experience?”*

This work is a collaboration result from members of three different entities – Design Museum, Zipipop and ConnectedDay – additional support has been provided by the Media Lab unit of Aalto University and by an AVEK Digidemo grant.

Our aim was to improve the access of Finnish daycares to the Finnish Design Museum’s educational activities. Since the museum is located in Helsinki, physical distance would prevent those daycares to be involved with these activities otherwise.

The development of the online version of Oswald and the Objects was inspired by the pilot workshops which happened in the Autumn of 2007 at a daycare in Helsinki, integrated in the project the Secret Life of Objects (Salgado et al. 2007). At that stage the workshops were led by members of the museum’s education team and included a live performance of puppet Oswald’s show to introduce the theme object of each workshop <sup>(1)</sup>. The educational activities created for the online version of Oswald and the Objects aim at offering children an experience similar to the one they would have if the puppet Oswald and the museum educators could visit them in person.

Our purpose was not to simply translate the Oswald and the Objects workshops to an online environment, rather enhance it with the possibilities of the online media and tools. This “blended” approach aims towards blurring the on-site activities with the online

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(1) As described in Chapter 2, section 2.3.

interaction by using social media tools for sharing materials (photos, videos, questions and stories) produced on the course of these activities. In this informal learning environment children are learning both from the resources offered by the museum and from peers, with the materials shared by other daycares.

The educational resources available from the website Oswald and the Objects include guidelines for educators on how to organize activities related to the museum's design collection at the daycares, specific information about design history and highlights of the most important themes to be discussed. They also provide the educators with some of the necessary materials, like videos and printable presentations.

We were also aiming at enhancing the experience of educators and children with these educational activities by using social media tools to encourage the sharing of materials such as photos and videos of the children's works among the daycares and the museum, and between different daycares. We hope this could help to raise children's awareness of the potential benefits of online media tools. By going through the process of presenting and discussing their works, the children feel that themselves and the work they did is relevant and interesting.

Furthermore, we developed a new website content management system which will give to Design Museum better control in self-managing their online educational materials. We expect this project to be an incentive for the museum to keep improving its online educational materials, for they can update the contents independently, at their own pace and timing.

#### **4.1.1 The service in brief**

Before starting the activities, the children watch a video of puppet Oswald. This video is available from Oswald and the Objects' website and replaces the live puppet show. Afterwards follows a discussion about the design object in the context of the children's daily experiences, moderated by the daycare educators (instead of the museum educators). Subsequently the daycare educators lead the children through a series of activities where they draw, model or design new objects or new contexts for the objects. In the end the children and educators gather to make an exhibition, discuss and tell stories about each other's works. According to the education expert Jyrki Reunamo's advice this makes the design process visible and gives value to the end product (Reunamo, J. 2008, pers. comm. 19 May).

We encourage daycare educators and children to take pictures or make short videos of the works and processes to later share online with the Museum or other daycares. They can also write comments to those images. For example, the short stories children told about their

own work. If the child cannot read or write the daycare educators may help. Comments are the starting point of a conversation between the parties. The museum educators can send a reply to the children or the daycare by also adding puppet Oswald's comments to the photos or by publishing a short video where Oswald thanks the children for their works and invites them to continue exploring different design objects. It's also possible that several daycares share materials and let the children discuss about them.

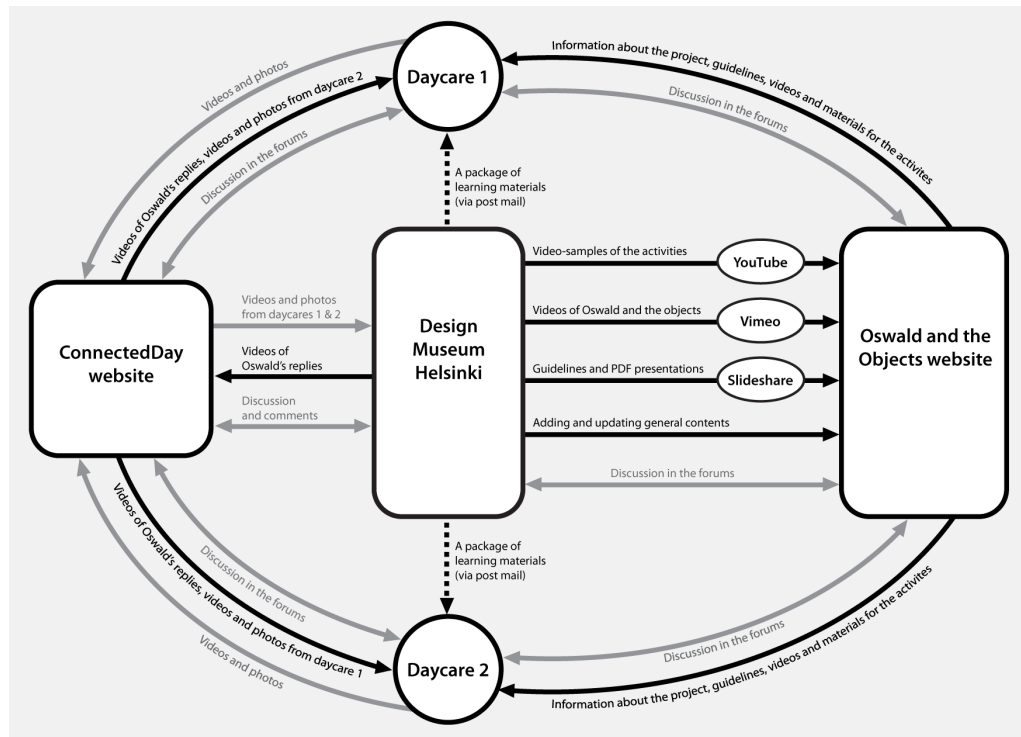


Figure 17 - Flow chart of the online service Oswald and the Objects.

Sharing materials and allowing comments and replies from all parties aims at keeping an open dialogue between the daycares and the museum. According to the feedback received, the museum educators can for example update, improve and create additional learning activities.

As for the children, we hope that through working with Finnish design classics they can also learn about Finnish culture. By debating and interacting with the adults and other children they can develop as individuals and improve their social skills. By using digital tools they can develop literacy skills about information technologies.

Parents also have access to the online service and can participate by commenting on the pictures. Involving the parents in the experience might positively affect communication between parents and children at home. It will improve parent's understanding about the

children's daily routines at the daycare, which may be the topic for a conversation.

#### 4.1.2 Differences from other museums' online educative services

The main difference between Oswald and the Objects and the online educative services from the other Finnish museums which I presented earlier resides mainly in this emphasis given to bidirectional communication between the museum and the daycare (or between daycares) and in the social media tools we are using to enable this communication <sup>(2)</sup>. For example, we are introducing digital video and discussion forums based on the best practices we have found at similar educational websites such as the Dragonfly (Twin Cities Public Television 2006a). Other social media like the image and document sharing tools were introduced based in the positive results I have observed in previous experiences.

#### 4.1.3 About our target audiences

The end audience for Oswald and the Objects project are pre-school children (3 to 6 year-olds). However we estimate that the main users of Oswald and the Objects website and related social media services will be the daycare and museum educators. The children are not required to navigate the website on their own, although they may choose to do so at home with their parents, for example.

The museum suggests that children should participate actively in the sharing of photos and comments but this will have to be moderated by the adults. For example, a child may take a digital photo of her work by herself, but the educator is the one who will have to upload it for sharing and write the child's comments or description about the work, since most children at daycares cannot read or write. When the daycare receives a comment reply from puppet Oswald or from children at a different daycare, the educator will have to read it for the children, if it's in written format. Therefore, most of the information on the website is aimed at adults, the educators, and the information organization and navigation system was mainly designed for them.

But since children will be accessing the website for viewing the videos of puppet Oswald and they can also access it from home we included in the webpages elements which are visually appealing for them too. For example, we used bright colors and some animations in the headers of the pages which children will be visiting. We decided about the use of colors, forms and animations of Oswald and the Objects



**Figure 18 - The PBS Kids website was an inspiration for Oswald and the Objects because it makes a pleasant use of colors.**

(2) These social media tools are further explained in Chapter 4, section 4.2.



website after benchmarking popular children's websites: PBS Kids (Public Broadcasting Service 2010), one of the world's most visited children's websites, Sesame Street (Sesame Workshop 2010), an internationally famous children's TV series and Pikku Kakkonen (YLE 2009), a well known Finnish children's series.

On a different level parents are also welcome, not just as an audience but also as active participants in the discussion forum or at the sharing spaces. The museum would appreciate and value their feedback as well.

And finally the general public can also access the Oswald and the Objects website (but not the children's photos and other shared content posted by the daycares). Their contribution is equally welcomed, as comments or suggestions.

#### 4.1.4 Web metrics and monitoring

In order to monitor the usage of Oswald and the Objects website and collect data for future optimization I decided to use Google Analytics web metrics service, since it's quite reliable and free of charge. This service will be most useful to determine technical details which are difficult to discover otherwise. It's valuable information that will add up to the feedback that we collect directly through email and the discussion forums.

For example it will be useful to know what screen resolutions, browsers, flash player versions and connection speeds are most common. The website can be optimized according to those. Knowing our traffic sources (how people are finding their way to the website) can help us be more effective in promoting the service since we can follow back our visitors and connect with them from their starting point. We can also verify which of the proposed activities are more popular by comparing which of the activity pages has more visitors. The Design Museum can then decide to invest more on those activities or to improve the other ones. It will also be possible to find out which regions and cities in Finland are using the website the less. This will allow the museum to decide in which regions they should further promote



**Figure 19 - The animated headers in the Sesame Street website inspired the animations in the website of Oswald and the Objects.**



**Figure 20 - Pikku Kakkonen website.**  
The icons in the lower menu of the Pikku Kakkonen website inspired the menu icons in the website of Oswald and the Objects.



the service - the objective being reaching all regions equally.

#### 4.1.5 Minimum technical requirements

At the moment, the minimum requirements to access Oswald and the Objects are an internet connection and a computer that can access internet, and with speakers or other sound system. The browser should be Internet Explorer 7.0, Safari 4.0 or Firefox 3.0 or more recent versions. The daycare educators should also have a basic knowledge of the internet, from a user's point of view. To get the most of the online service the daycares should also have a webcam or some other device that can take pictures and/or record video.

However, given the fact that a significant number of daycares is still without an internet connection that can be accessed by children, the Design Museum will produce a DVD with the same educational resources to distribute via post mail.

#### 4.2 Structure and key elements of the service

At this stage of development the online version of Oswald and the Objects combines two different web services: the Oswald and the Objects website, owned by Design Museum, and the online community website of ConnectedDay. The language is Finnish, although a translation to Swedish is also being considered by the Design Museum.



Figure 21 - The frontpage of the online service Oswald and the Objects.

The Oswald and the Objects website can be accessed by the general public. It is used by the museum to deliver the necessary information, documentation and other digital resources about the educational activities to daycare educators. The materials include videos, photos, guidelines in Powerpoint, PDF or other slideshow formats. There is also a small discussion forum for enabling communication between daycare educators and the educators in Design Museum. The forum is equally open to the general public, for collection of comments, questions and suggestions.

There was also the need for a channel where daycares could share photos, videos, stories and comments from children about the works and receive comments and replies from the museum. This kind of materials are being shared through the website of ConnectedDay, where access is restricted to daycare educators, parents and Design Museum educators.

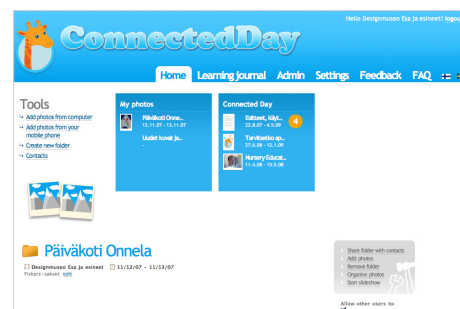


Figure 22 - The ConnectedDay website.

#### 4.2.1 The role of digital video in Oswald and the Objects

Digital video is becoming an extremely popular media. Any digital photo camera and most mobile phones have now very reasonable video recording capabilities, making this technology widely accessible. Video editing software can now be obtained free of charge; and digital video distribution was exponentially leveraged by free video sharing sites like YouTube, Vimeo or Blip.tv. As a consequence, some groups of young people already feel more comfortable expressing an idea by using moving images than by writing text.

Digital video is nowadays so fast and inexpensive to produce and distribute on the internet that I considered it as a good option for replacing puppet Oswald's live show, since it was impossible to replicate a live show in a context of larger distances and larger number of daycares. From this point of view, digital video had an important role in expanding the reach of Oswald and the Objects.

From another perspective, we were aware that video alone cannot fully replace the whole experience of contacting with the puppet and the museum educators in a face-to-face situation. One can better manipulate the viewer's attention to specific details and sequences in a video narration, but on the other hand the flow of communication goes only one-way. It lacks the possibility of immediate interaction and dialogue with the children, which is described by Mašek as "(...) an important premise to the successful teaching and thinking" (Mašek 2005). Immediate interaction used to happen in the live shows, for example, when the puppeteer Anna Louhelainen made puppet Oswald directly ask the children about a

certain object and what it could be used for. Or when children spontaneously gave tips and directions to the puppet Oswald in the middle of the show, to which he reacted promptly.

However, if we combine digital video and social media some level of interaction can still be supported. Video replies can be sent from one side to the other, and a dialogue can be constructed even if it is spread through space and time. I will follow explain in which ways and for which purposes digital video is being used in Oswald and the Objects.

### ***Video-samples of the activities***

These videos show the work flow and outcomes of the pilot workshops done in 2007. They were filmed during the events at the pilot daycare. The purpose of these videos is to instruct and encourage the educators to use the service. As we have learned from the series Design Squad and DragonflyTV <sup>(3)</sup>, the videos show a step-by-step sequence of the activities and give examples of the results achieved by the children. They also show how much fun the children and educators can have while doing the proposed tasks. They are an important activating factor. The videos with sample activities can be viewed from the Oswald and the Objects website, under the main menu link Galleria (gallery).

### ***Videos of puppet Oswald and the theme object***

These are videos of puppet Oswald and his stories about the theme design object for each set of activities (for example the Aalto vase, Teema mug). They introduce the activity's theme. The videos are viewed by the children before they start each activity. They stimulate the children's analytical point of view by presenting the object out of its usual everyday context. These videos can be viewed from the Oswald and the Objects website, from the subpages under the main menu link Tehtävät (tasks).



**Figure 23 - Video of the puppet Oswald and the Teema mug.**

### ***Videos made by the daycare educators***

These videos document the works and processes developed by the children during the Oswald and the Objects activities and they are made by the daycare educators. Educators in daycares using ConnectedDay services have received camera phones and training in using those camera phones to collect photos and videos, upload them and share them in ConnectedDay's secure web environment. These videos allow Design Museum to follow the results achieved by children during the activities and give feedback to children about their works. Daycare educators can share the videos with other daycares to compare experiences.

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(3) See Chapter 3, sub-section 3.2.3.

***Videos of Oswald's replies***

These are videos of Oswald addressing the children about their work. When the daycare educators share images of the children's works with the museum, the museum educators send a video of puppet Oswald back to the daycare thanking children and inviting them to continue exploring different design objects. This video is pre-recorded and the museum shares it with each daycare individually through ConnectedDay's website. At the moment this video is the same for all daycares but in the future it may include personal messages, for example by mentioning the names of the addressed children and making specific comments on their work.

**4.2.2 Social media in Oswald and the Objects**

In the online version of Oswald and the Objects social media is being used as a tool for communication between the daycare and the museum educators. This is an inexpensive and easy way to manage, distribute and share content such as video and photos, which is important for the often limited budgets of cultural institutions. It allows them to invest more on content production rather than on buying media space.

At the moment Oswald and the Objects is using two basic forms of social media: content communities (YouTube, Vimeo, ConnectedDay, Scribd) and discussion forums (Zipi Web Builder). I follow explain which services we are using and how they are being used.

***YouTube and Vimeo: video sharing***

Cost efficiency was the principal reason for choosing Vimeo and YouTube to share the videos produced by Design Museum. They are both ready to use and available for free. Also most video sharing services already include several social interaction tools which can benefit the project. For example:

- Commenting and rating options, which can be used as an extra tool to collect feedback from a wider audience than just daycare educators.
- Tagging options, which improve the chances of videos being found by people searching for related topics or keywords, and thus help spread awareness of the project.
- Direct sharing connections to other social networks, allowing everyone to share Oswald and the Objects videos and publicize the project easily.
- Statistics and view counters, which can give us a good idea of how popular the videos are, where our audience is located and where the website is getting traffic from.

YouTube is the most popular video sharing. We initially planned to store all Oswald and the Objects videos from Design Museum at YouTube since this is probably the video player interface that most people are familiar with. When we did the first round of tests at the daycares in June and September 2008, we also noticed that some children could

recognize YouTube's brand and they mentioned that YouTube was "cool". It's important that children have a positive image about the service for this could influence their interest and commitment with the project and the activities proposed.

However, when we finalized the visual design for the website we decided that Vimeo would be a better option for storing and streaming the videos of Oswald and the theme objects (the videos classified as type 2). This change of opinion had purely to do with aesthetic reasons: we wanted to embed the videos to Oswald and the Objects' website frontpage and to make the layout visually coherent we needed to have a picture of the object against a white background as the video thumbnail. Vimeo allowed us to upload any image that we wanted to have for the video thumbnail whilst YouTube only allowed us to choose 3 thumbnail options selected from the video's self contained frames. Since none of those 3 options was the picture we wanted, we decided to switch to Vimeo.

Vimeo also had a better standard video quality than YouTube, and allowed registered users to directly download the original video files. This may be useful in case the daycare has a computer but not an internet connection, since the educators can still download the videos in other places and show them in the classroom. Or, if a daycare is not a client of ConnectedDay but they still want to send a video of the children's works to Design Museum they can do it by uploading the video to Vimeo. The daycares can define privacy settings for their uploaded videos, for example giving access only to Design Museum. Then the museum will be able to access and download the original video file to keep for documentation. This would not be currently possible with YouTube, because to download a video from YouTube an auxiliary software such as Realplayer is needed.

However, for precaution we didn't remove all videos from YouTube. We are aware of some disadvantages that may arise from using free services: they may suddenly cease to exist and there is no guarantee that they will be forever free of charge. We decided to keep the videos simultaneously in Vimeo and YouTube. If one service becomes unavailable we can alternatively use the videos hosted in the other service. For example, Blip.tv is another video sharing service which allows direct downloads of the original files (Blip Networks Inc. 2009). We may consider using it as well in the future if we need an alternative for Vimeo. Using several services in parallel also brings the benefit of increasing the possibility of people finding and sharing the videos giving more visibility to the whole project.

### ***Zipi Web Builder: discussion forums***

We planned to enable discussion forum features in some pages of the Oswald and the Objects website. This decision was based on early advice from the education expert Jyrki Reunamo (Reunamo, J. 2008, pers. comm. 19 May). In Reunamo's opinion we should collect written feedback as well. Thus the purpose of these forums is to collect the experiences, doubts and suggestions of the educators about the educational activities. Each set of activities has its

own webpage and in there, it's own discussion thread. These discussion threads are also available all together under a link from the main menu, called Discussions (Keskustelu).

We made the discussion threads visible in several places on the website to encourage an active participation from the audience. We assumed that this would increase the probability of people contributing to the discussions. For example, some threads may be added to the website's frontpage, and they may alternate regularly. The inbuilt features of the content management system that we are using in Oswald and the Objects main website allow us to place the same discussion thread on several pages and update them all automatically.

Another approach to encourage contributions is to populate the discussion threads with comments, questions and answers on the discussion threads before launching the website. This initial content has the purpose of breaking the ice and giving leads about what kind of feedback Design Museum would like to receive.

Lowering the barriers to people's contribution is also important, as we learned from a case about visitor participation at the Delaware Art Museum (Fisher et al. 2008). Thus in Oswald and the Objects there is no need to register or login in order to comment in the discussion forums. They are public and everyone is welcome to contribute or send feedback. I am aware that this may also allow for a number of unwanted or inappropriate comments, but the website administrator will get an email notification for each new post, which will help monitoring the forums.

### ***Slideshare: document sharing***

Design Museum needed to share some Powerpoint files with the daycare educators in order to offer them more specific information about design history and point out the most important themes to be discussed during the educational activities.

We decided that the simplest way to share these documents would be to use an external service for document sharing with given proofs in reliability, free of charge and which gave a possibility to embed the documents in Oswald and the Objects website. We considered the embedding option to be the decisive factor for choosing to use such a service, since this allows the visitors to browse inside the document directly from the website, without needing to download it beforehand.

We looked at mainly two options among online social publishing services: Scribd (Scribd 2010) and Slideshare (SlideShare Inc. 2009). They both offered very similar features so we searched for the number of users and visitors of each and chose the one that had most traffic, as we assumed that the more traffic a service had, the more established it was and the less likely to be discontinued in a near future.

To determine the number of visitors of both Scribd and Slideshare we used the web service Compete (Compete 2010). As shown in Compete's graphic below, Scribd has had a clearly higher number of visitors: about 4.8 million in one year, against about 76.000 from Slideshare. Scribd was therefore the service we initially planned to use.

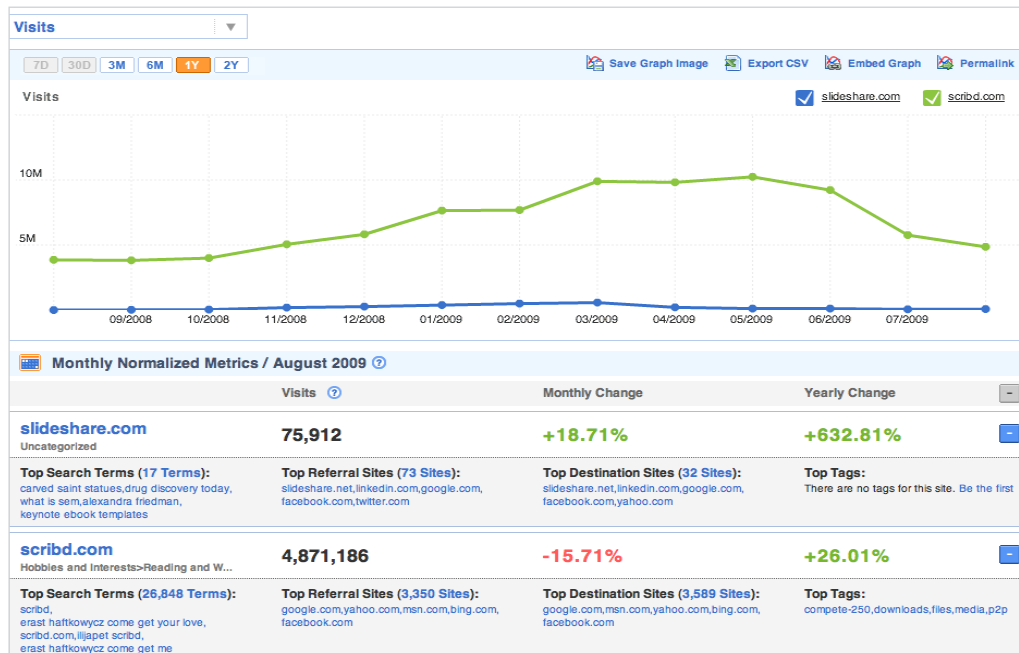


Figure 24 - Comparison between the number of visits to Slideshare and Scribd's websites, from September 2008 to July 2009.

This choice, however, was also not the final one. When we tried to embed the document in our website we found that the Scribd player hides the control tools from immediate view. In our opinion, this feature harms the usability of the service because it doesn't indicate clearly what kind of actions a person can perform in the player. At first sight, the Scribd



Figure 25 - Screenshot of the Slideshare player.

document looked like a regular static photo. There was a probability that people wouldn't understand immediately that it is a slideshow presentation and that one can browse through the pages.

Slideshare was the opposite. Their player shows the most important control tools at the bottom, like most video players. There is even a moving arrow on top to invite users to click for the next page. Additionally, it allows direct sharing of



documents to Facebook, Del.icio.us and a number of other popular social networks. One can also send the document by email to a friend directly from Oswald and the Objects website just by using the Slideshare tools. Slideshare has also a more appealing visual interface, therefore this was our final choice.

### ***ConnectedDay: photo and video sharing***

We needed a channel with restricted access where daycares could share photos, videos, stories and comments from children about their works and receive feedback, comments and replies from the educators in the museum. We initially thought about using Flickr (Flickr 2009), since it can handle both photos and videos and it has privacy options.

We changed opinion when we learned that ConnectedDay had already its own secure system of photo and video sharing especially aimed at daycares. ConnectedDay describe themselves as a community site aimed at professional daycare providers, with the goal of increasing parental involvement (ConnectedDay 2009). They provide a secure picture and video sharing service from daycares to parents. Additionally they supply daycares with a high-quality camera phone and give training for daycare educators on how to use the service. Pictures and videos taken with those camera phones are automatically uploaded to ConnectedDay's web-based photo diary, where they can only be viewed by authorized people.

ConnectedDay had around 150 daycare and preschools using their service in Finland by mid of the year 2008 when we proposed them to collaborate in our project. They agreed to participate by providing one camera phone and one account in their service for the Design Museum, free of charge for one year.

When the daycare educators upload the children's photos, videos or stories to ConnectedDay they can share them with the museum. The museum can then access the images and comment on them as well; the museum can also use ConnectedDay to send a short video of puppet Oswald thanking children for sharing their works. Besides, the Museum can act as a dialogue moderator by putting different daycares in contact with each other, sharing images from one daycare with the other; the children will be able to see what kind of works and ideas came from their peers in different cities and send their comments to them. By encouraging dialogue and use of social interaction tools the children will also learn about the possibilities of digital and online media.

Finally I may add that the idea of using other photo and video sharing services was not completely put aside, since ConnectedDay is a paid service and many daycares are not using it yet. The museum educators wish to make Oswald and the Objects accessible to the largest number of daycares, therefore a solution for the ones which are left out of ConnectedDay's network will be prepared in the future. But at moment our prototype uses only this service.



### 4.2.3 Zipi Web Builder CMS

One of the requirements we had when developing the Oswald and the Objects website was to use a content management system (CMS) which allowed the people at the Design Museum to update and customize the contents of the website, without the need to resort to a programmer.

I suggested Design Museum to contact Zipipop to join the project and build the Oswald and the Objects website, also providing the necessary CMS. To finance the work Zipipop applied for the AVEK Digidemo grant as a joint project together with Design Museum and ConnectedDay. The project application was submitted under the name Pienet Löytöretket. It received a grant in the amount of 17.000,00 euros, in December 2008.

The website was designed together with the Design Museum's education team, who would be in charge of updates and content management. While we were discussing its contents, structure and visual design, the initial plan was to build this website using an open-source free of charge CMS called Drupal, which Zipipop had been using for managing the contents on their own website. However, those at Zipipop who were using Drupal were not totally pleased with the system. In Drupal it was complex to customize the several components and visual layouts without the help from a programmer. This CMS also had a complex taxonomic system for structuring a website's pages and menus. Therefore it didn't suit the needs of the people in Design Museum.

When we started to brainstorm about the ideal features of a very "simple to use" CMS we realized that there were no such softwares available, at least not to our knowledge. Taro Morimoto and Tuomas Laitinen, from Zipipop, then proposed to extend the project's framework towards developing Zipipop's own CMS, which would include such features.

Our premise was that customizing and managing website contents should be as easy as creating a Powerpoint presentation, editing a Word document or writing a post in Blogger. We would like that the majority of the webdesign work could be shifted from the programmer to the visual designer. We wanted visual designers to build a website directly in the browser, in a similar way to how they build a layout in Photoshop. As for website owners, they should be able to modify, add or remove contents from the website without having to deal with complex taxonomic systems, nor to request that service from external companies. Tools and actions should be intuitive, so Zipipop created the new CMS in a system of What You See Is What You Get (WYSIWYG).

The system's core functionalities were developed between January to April 2009. It was built using a Django framework and it runs on top of Google App Engine. Zipipop decided to

name it Zippi Web Builder, referring to the fact that one can now build a website quite fast (fast = zippy). I will follow describe and illustrate the main features that make Zippi Web Builder a better CMS to be used by anyone with just average internet skills.

### ***General settings and content page***

When a user logs in to Zippi Web Builder she is taken to the control panel page. From there it's possible to access all web site pages, pages revision history and most elements of the website. One can define the general visual aspect of the website, mainly background and foreground colors, as well as the total size of content areas. One can also define the url and set up Google Analytics tracking without having to write any line of code.

### ***Menu editor***

Menus can be created and edited directly in Zippi Web Builder in an intuitive way. In the menu editor it's possible to define both the visual appearance of the menu buttons and link them to any page within the website.

### ***In place and online content editing***

I believe this is one of the main reasons to use this CMS. To edit the content of a page one has only to login and switch the page from view mode to edit mode, never leaving the website. The content can be changed from within the page and online, without the need for using any File Transfer Protocol (FTP) clients; there is no need for extra applications to transfer files from one server to another.



Figure 26 - The website's frontpage in view mode.



Figure 27 - The website's frontpage in edit mode.

For example, text can be written directly on the page and formatted in place with traditional text editing tools, like when editing text on a Word document. This is also true for images, since they can be uploaded and placed directly in the web page. It's also possible to re-size photos and videos or other objects by using a direct scaling tool.

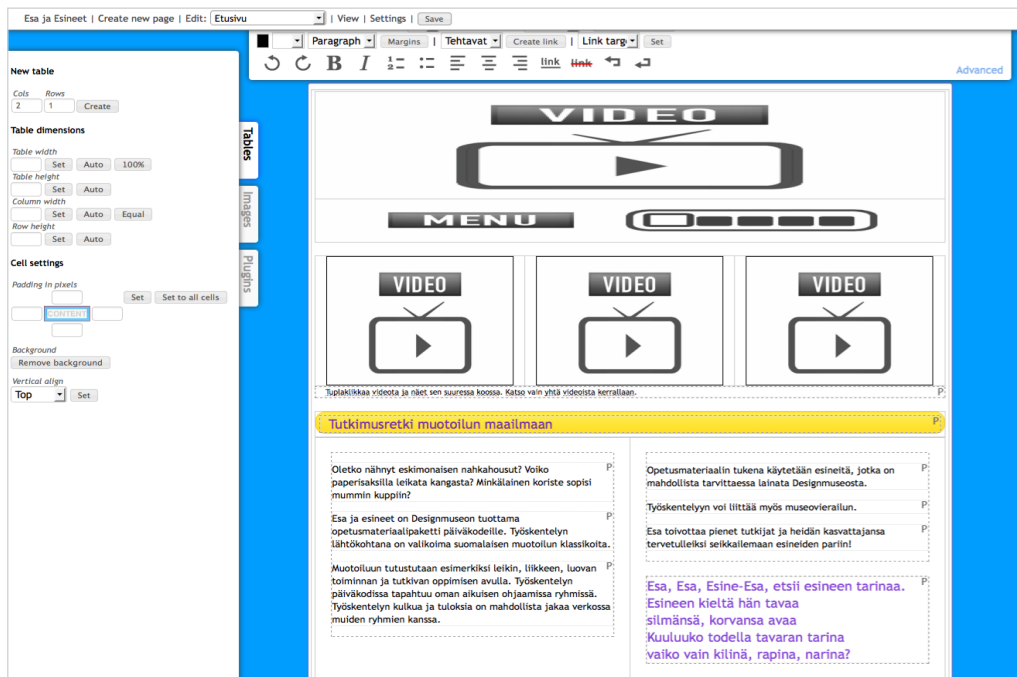


Figure 28 - The website's frontage in edit mode, showing the table editor on the left and the text editor on top.

### Integration with other web services

It's possible to add directly documents to a web page and embed objects such as videos from YouTube and Vimeo, slide shows from Scribd and Slideshare and calendars from Google. These objects can be re-sized directly on the web page with the scaling tool. It's also possible to embed other objects (for example from Facebook or Blip.TV) by creating a Snippet. But these objects cannot be re-sized without changing some parts of their code.

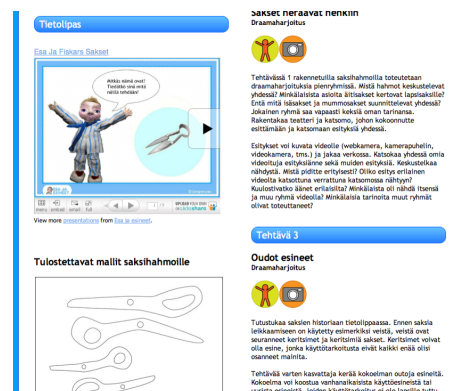


Figure 29 - The Slideshare player integrated in the Oswald and the Objects' website.

### Discussion components

Discussion spaces like forums can be easily created and added to the web pages thanks to the Discussion component. The same discussion thread can show simultaneously in several pages of the website, and replies to the thread will be automatically updated in all pages where the discussion is located. If the person writing on the thread is a registered user the person's avatar image will be displayed next to the text. Otherwise a default image will appear.

***Disadvantages of Zipi Web Builder***

Zipi Web Builder is not at the moment an open source platform, unlike Drupal. This may be a disadvantage in the sense that all the development is dependent of Zipipop. There are however plans to open source Zipi Web Builder in a near future.

**4.3 Risk anticipation**

Although we have put great efforts into designing the online version of Oswald and the Objects by employing methods and processes that daycare educators had already experienced (like the ConnectedDay environment) and technologies which are widely used by the online communities (Vimeo, YouTube), we are aware that some problems might still occur which could prevent daycares to use the service successfully. In this section I present the most significant risks that the teams have anticipated and discussed in order to prepare for a series of tests that will validate the current version of the online service Oswald and the Objects.

The first risk to consider is that there might not be an internet connection or a computer available at the daycare, or the daycare educators might not be familiar with internet at all. This would be a major restriction for using the Oswald and the Objects service. However the Design Museum has anticipated this problems by planning to produce a DVD containing most of the resources available at the website: Oswald's videos, photos, the guidelines of the activities and printable presentations with additional information about design history. The DVD may be sent to daycares by post mail.

Similarly the daycare educators might not have access to the physical objects which theme each activity, even though they are common objects from everyday life in Finland. If this is the case the Design Museum has plans for sending a package of learning materials, including the physical objects, by post mail. It's important for the learning experience that the children can access an original copy of the themed design objects.

Another risk is that daycares have only old computers with equally ancient software and that the internet connection is slow. In this case the website and contents might take a long time to load and some of the contents might not be visible at all. For example, the older internet browsers might not be able to display the videos if the Flash player version has not been updated. Situations like these need to be evaluated case-by-case. If the contents are not displayed correctly, one solution may be to order the DVD from Design Museum. If however the problem is an outdated Flash player, on the website we can give instructions to daycare educators on how to upgrade to a more recent version. We can even build an additional webpage dedicated to troubleshooting and problem solving.

Another situation might occur, in which the daycare has a computer and internet connection available but no speakers nor sound system. At the moment there is a need for sound in order to fully understand the puppet Oswald's videos. The absence of sound could however be compensated with comments and questions from the educators to the children while they watch the videos. On the website's activities pages (Tehtävät), under each video of puppet Oswald we included a short description of the story being told as well and suggestions of questions to be asked.

It could also happen that the daycare is not using ConnectedDay anymore, or that they never used that service. If this is the case sharing the children's work results will require a different strategy, as we haven't prepared an alternative to ConnectedDay yet. In the future however, the alternative may be using Flickr, as it also allows the sharing of photos, videos and comments. Although this is a possibility, it will be necessary to examine in detail Flickr's privacy settings and sharing options before making a decision. Other solutions could be asking the daycares to send the pictures by email. Printing the pictures (or making a *collage* of the works) and sending them by post mail could be the alternative for daycares without an internet connection.

Another important risk to consider is that daycare educators might be unsure about how they should plan the videos and photos of the children's work results, or what type of contents the Design Museum would like to receive as feedback. To clarify this problem we have published examples of photos collected during the Oswald and the Objects' workshops at the website, under the gallery area (Galleria). We have also plans to collect more examples of the desired feedback materials in the following test sessions happening at daycares around Helsinki. Some selected samples will be published both at the Oswald and the Objects website and at the corresponding ConnectedDay areas.

#### **4.4 Validation of the service proposed: guidelines**

Unfortunately it was not possible to arrange a comprehensive usability test to the current version of Oswald and the Objects before the deadline to deliver this thesis. Nonetheless Hanna Kapanen and I have outlined the guidelines for validating and evaluating this service proposal once the test sessions are scheduled.

The test tasks at daycares will be guided and conducted by the daycare educators themselves. In the classroom where the activities will take place there will also be present a test team — a member of the Design Museum's education team and, whenever possible, myself. This test team will not interfere with the course of the activities but rather observe and register how the activities develop, the general reactions of the educators and children to the proposed activities and what obstacles might come across the desired outcomes of the activities. The

sessions will be documented with video, photos and hand written notes for future analysis. In the end of each test session the test team will interview or give a questionnaire to the daycare educators addressing specific details of their experience. Below are examples of details to be observed during the test sessions and further below are examples of questions that can be asked to the educators:

***Details to observe during the test sessions:***

- What type of computer, internet browser, sound system and screen resolution did the daycare have?
- Did the video materials play without major problems?
- Did the children understand the narrative in the video?
- Did the educators use the guidelines for discussing about the themed design objects?
- Did educators collect photos and video images of the children's works?
- When did they collect these images, during the activity or after it ended?
- How long time did the children took to complete the proposed tasks?
- What was the general attitude of children and educators towards the activities?

***Questions for the educators:***

- Have you ever used online materials in activities with the children?
- Did you find any obstacles in accessing the website or in accessing some of its contents?
- Did the museum give a clear idea of its expectations when introducing you to the Oswald and the Objects service?
- What did you expect children to learn from these activities?
- Did the activities meet your expectations?
- Did the children enjoy the process?
- What did children enjoy the most? And the less?
- Would you recommend Oswald and the Objects to other daycares?
- Did you find all the information you needed in the website? Was it easy to find that information?
- Did you experience any problems in particular with watching the video materials?
- Were the provided guidelines useful to conduct the activities?
- Did you need to print the guidelines or consult them during the activities?
- Are you a client of ConnectedDay?
- Do you plan to share images of the children's works? If not, why?
- Will you show images from other daycares' works to the children and discuss about them? If yes, when – in the same day or in a different day? If not, why?
- Did / will you make an exhibition with the children's works at the end of the activities?
- How long time did the workshop took altogether (including sharing images and discussing).
- Do you think the length of the workshop is adequate to the daycare routines?
- Would you like to take the children to the museum in the continuation of this project?

- Did parents show interest in visiting the museum with the children as a continuation of this project?

Following the on-site observations at the classrooms, the test team will also follow the video and photo contributions of each daycare to the shared space of ConnectedDay as well as the flow of conversation in the discussion forums. This will be done during and extended period of time, from one to three months (depending on the number of daycares interested to participate in this round of tests).

## 4.5 Creating awareness of the service

At the moment Oswald and the Objects is being announced as a demo of a developing service. Daycare educators are being encouraged to contribute by giving their opinions and suggesting improvements.

The Design Museum has been announcing Oswald and the Objects using several media. An article was published for example in the November 2009 paper edition of the publication *Ampiainen* (Design Museum Helsinki 2005), which supports architecture and design education for schools in Finland. An workshop was organized at the seminar *Creating the Future*, organized by Arkki, School of Architecture for Children and Youth in Helsinki on September 3 and 4, 2009 (Arkki 2009). The service is mentioned at the museum's website (Design Museum Helsinki 2008) as well. Furthermore the museum has included in its permanent exhibition some spots allusive to the Oswald and the Objects. These spots are a series of drawers containing several objects and materials that visitors and especially children visitors can explore by using all their senses. Daycare educators visiting the museum have also been told about the service.

In the immediate future, the museum has also plans to create awareness of Oswald and the Objects by contacting directly a number of daycares in Helsinki and Espoo and by contacting the departments of the City of Helsinki and Espoo which are responsible for the city daycares. ConnectedDay has plans to market Oswald and the Objects to the daycares using their service in Helsinki and Espoo as well. A flyer with further information about the service will be distributed by Design Museum and a competition for daycares will be organized as a way to encourage its use. There are also plans to integrate Oswald and the Objects in another ongoing project by Design Museum, called *Fantasy Design* (Fantasy Design 2010), which started already in 2003 and will last until 2011.

Social media can also be used to spread the word about this project among the community of educators and show the project's achievements to the Finnish society in general. For example we can create a Facebook fan page for Oswald and the Objects, publish an RSS



feed to warn daycare educators every time the website is updated with new content or activities, or invite participants to subscribe the Vimeo and YouTube Oswald and the Objects' channel.

## 4.6 Copyright and privacy issues

Using public and free web services raised the issue of copyright and privacy issues, especially in what relates to materials produced by the Museum, and photos and video showing the children in the service's test sessions.

When we did the first tests of Oswald and the Objects at the daycares in 2008 the Design Museum prepared an agreement for the parents to sign. It gave rights to the museum and the other participants in the project to publish the photos and videos collected during the test sessions only in media and publications related to the Oswald and the Objects project. To preserve the safety and privacy of the children it was promised that their full names would not be disclosed.

Once the service starts working fully, the daycares that are using ConnectedDay can upload their photos and videos to there, so no special agreements need to be made apart from the ones that were already made for ConnectedDay. However, if a daycare is not using ConnectedDay then other services could be used instead. In this case the Museum may provide the daycares with a draft of an agreement similar to the one we used for the tests in 2008, where parents are asked to give permission for the daycare to publish the materials on the internet. If the Design Museum wishes to publish some of the future photos or videos from ConnectedDay in the Oswald and the Objects website or in any other media-sharing sites with public access, then they will also need to ask permission to the parents for each specific photo or video.

The Design Museum is at the moment holding the copyright of all produced materials, video, photos text and slideshow documents. A license under Creative Commons of Attribution-Non-Commercial-No Derivative Works (BY-NC-ND) is being considered for some of the materials that were solely produced by the Museum and myself, like the videos of Oswald and the objects. As for the shared documents and slideshows some of them include photos that belong to other organizations and they granted a permission of use only to the museum. In this case the full copyright must be observed.



## 5. Personal contribution and responsibilities

In this chapter I provide a detailed description of my personal contribution for Oswald and the Objects while I reflect about the several phases of project development.

### 5.1 Designing the concept

A concept designer in the digital field is someone responsible for creating and communicating visions of new digital products and defining how they will successfully work. Ideally, a series of concepts should be explored before deciding upon one particular design: exploring different solutions to a problem reduces the risk of failure.

To enable an exploratory attitude it's important that the designers remove unnecessary constraints to their imagination, for example by questioning the assumptions about the product's end users and the environment where it will be used. It's equally important to consider the required and available technologies for producing, distributing and consuming the new product. This information should be collected and evaluated through research and early testing.

In reality, however, due to schedule pressure, bad planning or lack of resources, exploration, research and early testing are quite limited. In that case the designers have to create concepts relying on personal assumptions and mental images resulting from their previous experience and memories. In my role as a concept designer for the Oswald and the Objects project I had to find a balance between both alternatives.

The concept for the online version of Oswald and the Objects was inspired by my observations of the pilot workshops in 2007. I realized that physical distance was a constraint for the project because the museum educators could only reach daycares close to the museum. I questioned the initial assumption that museum educators need to be physically present at the daycare for the workshops to happen. Using the internet could be a solution for this constraint if we assumed instead that daycare educators would be capable of organizing design related activities for the children as long as they were provided with guidelines and other support materials online.

Hence I suggested that Design Museum could start a web TV channel for daycares and produce a series of episodes where puppet Oswald introduced children to a number of

objects from the Museum's collection. The puppet had never seen the objects before and he would ask children to explain to him what the objects were and what they could be used for. The children could participate in the TV channel by sending videos to puppet Oswald where they could tell stories about those objects and their purposes.

The concept developed with contributions from Andrea Botero, Marina Salgado and from the museum's education team: Hanna Kapanen, Mirjam Krafft, Anna Louhelainen and Leena Svinhufvud. By collaborating with the museum educators we ensured that Oswald and the Objects followed the education objectives of the Design Museum, making the project valid not only from a designer's point of view but also from the educational perspective. The preliminary ideas were debated during the autumn of 2007 in several meetings and by email. I supported this brainstorming with a benchmark research of similar services.

We decided to explore the possibilities of this concept further by doing a series of tests to identify and learn about our audiences and their needs. This was our first validation of concept. In December 2007 we produced some of the video resources, the four episodes of puppet Oswald and the theme objects. The videos were filmed by me and acted by the puppeteer Anna Louhelainen assisted by Mirjam Krafft. During the spring of 2008 Hanna Kapanen produced the guidelines for activities about two of the design objects, the Aalto vase and Fiskars scissors. The first prototype of the project was also produced by then, and during June and September 2008 it was tested in two daycares. Hanna and I were present at the test sessions to collect feedback and improvement suggestions from the daycare educators.

The final step was to find the key partners to collaborate in developing the project. I contacted Zipipop and ConnectedDay. We met together with Design Museum to discuss the roles and contribution needed from each entity. We reached an agreement about deadlines, budget and sources of funding. By the end of September 2008 the concept phase of Oswald and the Objects was completed. I was appointed as the project manager and started to work on the next phase, planning.

## 5.2 Managing the project

Project management is one of the areas that I would like to follow in the future. This was the reason that I chose the role of project manager in Oswald and the Objects after the project received the AVEK Digidemo grant.

I attended several courses in Media Lab related to project management to prepare myself for this role. My background as a designer has also influenced my approach to project management. Due to my experience I find that project management is often more

effective when project managers have previous experience in other executive roles within the project and not only in management; it gives them a clearer understanding of the execution processes. This approach to project management works especially well for small scale projects that follow the Agile (Beck, K. et al., 2001) development model. There is a flat hierarchy structure, teams are independent to make their own specific decisions and the project manager does not need to keep tight control over project details of which he / she is not an expert.

Technically, project management is about planning and monitoring resources and budgets, creating effective communication channels, analyzing and minimizing risks and taking the required action to ensure a project is successfully executed. But from a pragmatical point of view we manage people, not projects. Project managers use soft skills regularly, for motivating and creating resonance among the people who work together. This, in my opinion, is one of the most important aspects that contribute to the success of a project. Therefore in addition to reading the Guide to the Project Management Body of Knowledge - PMBOK (Project Management Institute, 1996), which is focusing more on the work breakdown structure of project management, I also read two books from Daniel Goleman, one of the most important authors in the field of emotional intelligence (E.Q.). The books were Emotional intelligence (Goleman, 1995) and The new leaders (Goleman, 2003). Developing competencies in emotional intelligence is a big step towards skillful management.

The PMBOK gave me solid bases to structure the planning and execution phases of the project while Goleman's analysis of leadership styles was extremely useful for my work as a project manager, which I will discuss further ahead. I had to coordinate and monitor the work of three teams that worked for different entities. Each of them had their own work practices and work culture established. This represented an additional challenge since Oswald and the Objects was the first project where I had the role of project manager. But since managing networks and not only single people is a characteristic of many modern projects I considered it to be a good learning opportunity as well.

### 5.2.1 Project plan development

My first concern as a project manager was to write the Project Plan. I wrote the initial Project Plan with the purpose of applying to the AVEK Digidemo grant, since getting external funding was the only possibility of producing the concept. Hanna Kapanen and Leena Svinhufvud (from Design Museum) and Richard von Kauffmann (from Zipipop) also contributed in the writing of this application. The application was sent in the end of March 2008 <sup>(4)</sup>. I have added the application document as an appendix to this thesis (Appendix B).

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(4) When we submitted the application the project was called Pienet Löytöretket. Only later the name was changed to Oswald and the Objects.

Because the initial plan was written as an application for funding it included a concise description of the project, its aims and objectives, identification of the audience, identification of potential benefits for the community, description of previous professional experience of the partners and their CV's. Otherwise it contained all the common requirements of a project plan: design and content specifications, work breakdown structure, a schedule estimation, total cost estimation, amount of necessary resources and skills. The project was granted €17,000.00 in December 2008 and consequently we proceeded to the next phase, project execution.

### 5.2.2 Project plan execution

Project execution started in January 2009. I started by making a new production map where I identified in more detail the work breakdown structure, deliverables and the production schedule (for the complete design and implementation timeline see Appendix C).

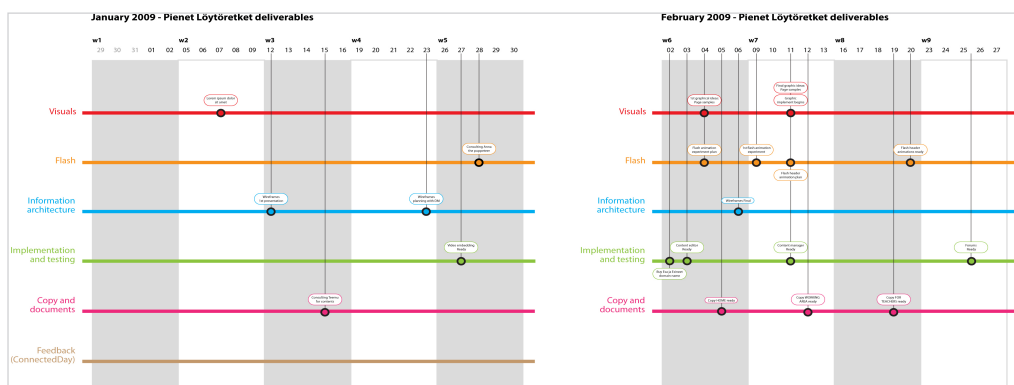


Figure 30 - The production map for January and February 2009.

Of all the tools and processes that I employed during the project execution phase there are three that I would like to mention in particular: Agile software development, Goleman's set of leadership styles and the production workshops.

#### *Agile software development*

Agile is a software development methodology guided by four simple principles declared in the Agile manifesto (Beck, K. et al., 2001):

*“Individuals and interactions over processes and tools  
Working software over comprehensive documentation  
Customer collaboration over contract negotiation  
Responding to change over following a plan”*

Oswald and the Objects is a small scale project and we had small teams for software and

design development. Therefore we adopted a management model close to Agile. This methodology became very useful especially when we decided to change the website's content management system platform from Drupal to Zipi Web Builder. We quickly made changes to the plan in collaboration with the Design Museum's team. Taro Morimoto (Zipipop's chief technical officer) was self-organizing the software development but he had frequent meetings with Tuomas Laitinen (the creative director) and myself, to inform about the latest updates and collect requirement suggestions. Change management documentation was only produced in the final stage, when we delivered the project report to AVEK.

### *Goleman's set of leadership styles*

While in Emotional intelligence Goleman writes about recognizing one's own and other's emotions, and their influence in handling general relationships, in *The new leaders* the author applies that knowledge into the work environment, focusing on the processes of management and leadership. According to Goleman, management is closely connected with leadership - project managers are often the project leaders as well. As managers they are responsible for consistently delivering the expected results to the project's stakeholders. As leaders, they should give their teams a sense of purpose beyond the scheduled goals, inspiring them with a compelling vision towards a collective mission.

This inspirational and supportive approach is even more relevant in projects like Oswald and the Objects where the financial compensation is limited to a very small budget and inevitably a great amount of work is done for free. Keeping the enthusiasm and unity of the core group during this process is crucial. In *The new leaders* Goleman (2003, pp.69-100) identifies six distinct approaches to leadership that can influence the emotional climate of an organization and thus affect their results: he calls it leadership styles. Four of these styles are sure to produce positive impact in the emotional climate of teams, creating resonance among team members which translates into better performance. They are the visionary, coaching, affiliative and democratic styles. The other two styles can also have a positive impact, but must be used with extreme caution otherwise they will create dissonance among the team, losing effectiveness. They are the commanding and pacesetting styles.

During the development of Oswald and the Objects I have mainly used a mix of four of these styles: visionary, coaching, affiliative and democratic. There was only one situation where I briefly resorted to the commanding and pacesetting styles. I follow describe each style and give short examples of situations where I have used them.

- **Visionary.** Visionary leaders help people to see how their work fits into the big picture, reminding them of the larger purpose of their work. They inspire employees with a true belief in their vision.

I used a visionary approach in the early stage of concept design, when I told about my vision

of the online version of Oswald and the Objects. I explained how the pilot workshops of 2007 could be adapted to the online environment and how the roles and work of the museum's education team could fit into it.

- **Coaching.** Coach-style leaders help people identify their individual strengths and weaknesses in order to plan their personal and career aspirations and establish long-term development goals.

While working on this project, Taro Morimoto expressed his wish to become an MA student at Media Lab Helsinki. I encouraged him to apply, gave him information about potentially interesting courses and discussed with him about my experience as a Media Lab candidate.

- **Affiliative.** Affiliative leaders nurture strong personal ties with employees and focus on their emotional needs even over work goals. Using empathy they build strong loyalty and trust bonds.

I used the affiliative approach throughout the whole project, for example, showing empathy when someone could not attend a meeting because of a sick child, and asking if the child was feeling better a few days after, when the meeting was rescheduled.

- **Democratic.** Democratic leaders meet employees regularly to listen to feedback. They are open to critiques as well as fresh ideas and advice. They seek agreement rather than make top-down decisions.

I used the democratic approach throughout the whole project as well. For example I listened to the other team members suggestions about the online service and included them into the original vision. In another case I listened to Taro and Tuomas' ideas about creating a new content management system (replacing the initial proposal of using Drupal) and added it to the project scope.

- **Commanding.** Commanding leaders demand immediate compliance with orders and often resort to intimidation. They seek tight control of situations, centralizing authority.
- **Pacesetting.** Pacesetting leaders aim for high performance, pushing themselves and their teams into doing things better and faster. If a team member fails to meet their standards they take over and get the job done themselves.

I used these styles only once: at the end of the project execution phase. ConnectedDay was late with delivering a report needed to justify their budget expenditures to AVEK. I had to demand the report from ConnectedDay against the possibility of being excluded from receiving AVEK funding in the future. I finally resorted to writing the report myself, only collecting from ConnectedDay their signature and stamp.

### ***Production workshops***

The teams from Zipipop, Design Museum and ConnectedDay worked in separate locations most of the time, and our main coordination and communication channels were email and phone calls. But we also had regular meetings to work together on specific tasks that we called the production workshops. They usually lasted one morning or afternoon and they happened alternatively at the respective offices or premises, sometimes even at the university.

We organized production workshops for example for designing the information architecture and wireframes prototype of the Oswald and the Objects website. The Design Museum and Zipipop's teams met during one afternoon at Design Museum to discuss about the necessary information and contents offered at the website and to collectively sketch a prototype of the several webpages.

We also had production workshops to build the webpages and add its final contents; to record the videos and voice of the puppet Oswald; to receive training in using the ConnectedDay file sharing service and to train the Design Museum educators in using the Zipi Web Builder content management system.



**Figure 31 - Production workshop at Zipipop.**  
Hanna Kapanen and Diana de Sousa working with the contents of the Oswald and the Objects' website.

## **5.2.3 Additional contribution**

During the project execution it was necessary to extend my role from project manager to several other smaller and temporary roles. This happened because we needed to complete a series of short tasks for which hiring a dedicated person did not compensate, given our small budget. The tasks included information architecture, wireframe prototyping, visual design, web design and content management, usability and accessibility testing and training the museum's education team in using the content management system. Given my background as a designer I was able to step in and perform these tasks.

### ***Information architecture, wireframes prototyping***

The first task in the execution list was to define and structure the information needed for Oswald and the Objects' website. From January to February 2009 I organized and participated in several workshop sessions where the education team from Design Museum, myself and Zipipop's creative director, Tuomas Laitinen, defined the information contents and structure for the website, sketched a wireframe of the website prototype and decided



the necessary interaction levels for adults and children.

To create a visualization of the information structure and website wireframes I adapted the method of low-fi paper prototyping described by Marc Rettig in Prototyping for tiny fingers (Rettig, 1994) into a low-fi prototype made with Google Docs. In a typical workshop session everyone contributed with suggestions of what information should be visible, where buttons could be located etc. We worked on a simple paper sheet, that I later adapted to a Google document and shared with everyone involved. The visual elements sketched in this prototype were only simple tables and text, using different colors and font sizes to define general content and buttons areas. Having the Google document allowed participants to continue developing the prototype after the workshop, and add suggestions and ideas even if they could not be present at the workshop.

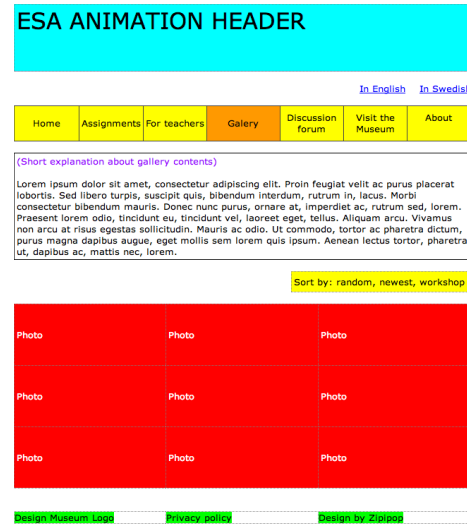


Figure 32 - Sample of the low-fi Google Docs prototype for Oswald and the Objects.

### ***Visual design, web design and content management***

The visual graphic style of Oswald and the Objects' website was defined by Tuomas Laitinen. Based on these style guidelines I designed mockups and completed the graphic details for each of the website's pages. I also built the webpages in Zipi Web Builder and added some of its initial contents.

### ***Training***

I organized and gave training to Hanna Kapanen, from Design Museum, on how to use Zipi Web Builder content management system. The purpose of this training was to ensure that the Design Museum is able to add and remove content from the website without needing external assistance.

### ***Usability and accessibility testing***

I have participated in the planning and realization of several test sessions at daycares, like I have described earlier in section 3.5.



## 6. Conclusion

In the context of my research I found that the use of digital media is already part of the daily routine in many Finnish schools. But there is still a need for contents and materials that give a meaningful reason for educators to use digital media in their lessons. In the particular case of daycares, the project Media Muffin was the only reference found of an earlier attempt to introduce digital media to pre-school aged children in Finland.

In my benchmarking exercise regarding museums as producers of educational resources for schools I found that very few of them provide lesson or activity materials that can be used in the classrooms without assuming that the students will make (or have made) a visit to the physical space of the museum. Educational resources that can be used by daycares without that assumption are even fewer. I also noticed the rareness of online participatory environments that encourage sharing and discussing, especially in Finland.

Therefore, as an answer to my first question in this thesis, *“What kind of online services can be created to improve the access of daycare centers to museum’s educational activities?”* I have conceived and developed Oswald and the Objects, an online service that daycare educators can use to perform educational activities with children about Finnish design objects from the Design Museum’s collection. The children and daycare educators are encouraged to use online forums, video, photo and document sharing services to connect and engage in conversation with other daycares and with the museum’s education team, sharing their learning experiences, obstacles and suggestions. The contents of the service were developed by the Design Museum’s education team. This collaboration was essential to ensure that Oswald and the Objects follows the education objectives of the museum, validating the project from an educational perspective.

As an answer to my second research question, *“How can social media be integrated in such services, to improve communication between daycares and museums and benefit the whole experience?”* I found that in order to get the most out of social media and social interaction tools and encourage communication between participants, those media and tools need to be planned and implemented by taking into consideration the background experience and practices of both daycare and museum educators. Hence for Oswald and the Objects we chose the ConnectedDay services which were already part of the daily routine of daycare educators and familiar to parents and children. We also chose YouTube and Vimeo video sharing services which are extremely popular and familiar to many internet users. It’s equally important to nurture the conversation within the project, to ensure that the discussion topics are relevant and appropriate for the target community. Therefore the Design Museum is responsible for guiding and moderating the discussion forums and other comment boxes.

The feedback collected at multiple test sessions carried at daycares has been mostly positive and we have tried to implement the improvements suggested by the daycare educators to the possible extend. Nevertheless Oswald and the Objects is an ongoing case study still in need of additional testing and improvements, and especially contents that make it a valuable resource for many daycares in Finland. The Design Museum has embraced the project heartily and the museum's education team continues to explore ways to improve the service by organizing further trial sessions.

From the survey made to daycare educators we concluded that most daycares have already good internet connections and computers that children can use, enabling them to access Oswald and the Objects. For the daycares that are still without computers or an internet connection in the children's areas, this service might be a good incentive to get one. However, to ensure the access of the largest possible number of daycares to these educational activities, the museum should still contemplate alternatives to online media, such as packages of learning materials that can be delivered by post mail.

Creating awareness of the project among daycares is another crucial factor that will determine its success, so it's important to have all collaborators also committed to promoting the service at multiple levels. Both the Design Museum and ConnectedDay have been involved in marketing Oswald and the Objects by contacting daycares directly. The service has also been referred to in publications aimed at daycares, in education related seminars, in workshops at the museum, and at the collaborators' websites.

Altogether Oswald and the Objects was a great learning experience for myself and extremely rewarding on a personal level. We had a very good work flow between team members, plus the core group both at Zipipop and Design Museum was committed, supportive and very passionate about the project. This has been of crucial importance for me and has kept my motivation during the two and half years that the project has lasted.

One of the most valuable lessons I have learned is how to concept and structure a project well enough to apply for funding and be successful: without the support from AVEK Digidemo Oswald and the Objects would have not developed further than concept level. All my other learnings are a direct consequence of this opportunity. I have gained better skills as a project manager, or better said, in managing people. I gained a better understanding of the complexity of designing communication and human relations by using social media, which is something beyond simple human-computer interaction. In between I also became more proficient in a few technical tasks, such as video recording and editing, and building webpages in Zipi Web Builder.

Moreover I have gained a deeper insight on how museums, online media and social interaction tools can benefit education programmes in several areas of knowledge and

school levels. Oswald and the Objects has only explored some of the possibilities that this type of contents could provide and a few of the obstacles to overcome. At last I reiterate that my initial hypothesis of creating a web TV network of museums directed at schools is still a valid proposal worth of further research. Active promotion of services like these could be a powerful means of raising the cultural awareness of younger audiences, as they offer multiple opportunities for cooperation between museums and schools.

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# Appendix A

## KYSYMYKSET

Designmuseon Esa ja esineen-sivustolta löytyy tehtäväideoita muotoilun alueelta sekä mm. videomateriaalia ja PowerPoint-esityksiä, jotka on suunniteltu leikki-ikäisille.

1. Onko päiväkodissanne käytetty opetusmateriaalia verkosta? Tai oletteko hyödyntäneet lasten kanssa jotakin tiettyä sivustoa Internetissä? Voitteko kertoa kokemuksistanne?

2. Esa ja esineet -tehtävien parissa saatuja kokemuksia voi jakaa verkkosivuston keskusteluosiossa muiden palvelun käyttäjien kanssa. Mitä ajattelette tästä? Tuntuuko mahdollisuus keskusteluun muiden päiväkodeissa toimivien ja museon henkilökunnan kanssa hyvältä? Voisitteko ajatella käyttävänne mahdollisuutta?

3. Esa ja esineet -sivustolla on myös mahdollisuus jakaa kuvia toteutuneista töistä ja työskentelystä muiden päiväkotiryhmien kesken Internetissä. Kuvat jaetaan yhteisöpalvelu ConnectedDayn ylläpitämässä suljetussa verkkoympäristössä, jossa osallistuvat ryhmät voivat tutustua toistensa kuviin ja videoihin.

Mitä ajattelette tästä? (Jakamista varten päiväkodin aikuisten on muistettava kysyä lupa lasten vanhemmilta, vaikka kuvia pääseeikin katsomaan vain rajattu ryhmä.)

4. Kuvien jakaminen ja toisten töistä keskusteleminen voi tuntua tärkeältä lapsista. Tämä vaatii kuitenkin, että lapsiryhmän kanssa päästään internetissä olevan tietokoneen äärelle. Esimerkiksi yhdessä päiväkodissa tämä toteutettiin niin, että lapsiryhmä käytti tietokonetta päiväkodin toimistossa ja työskenteli muissa tiloissa.

Onko tämä teille mahdollista ja voisitteko kuvitella käyttävänne tällaista palvelua? Jos lasten puolella ei ole tietokonetta, voisiko lapsiryhmä piipahtaa toimiston puolella yhdessä aikuisen kanssa?

Esa ja esineet sivustoa ja sen tehtäviä voi tietenkin käyttää myös ilman työskentelyä internetissä. Tehtäviä ja materiaaleja sivuilta voi kerätä päiväkodin aikuinen ja tehtävät toteutetaan päiväkodin normaalissa työskentelytilassa. Vuorovaikutusta ja keskustelua syntyy myös oman ryhmän parissa!

5. Verkkosivulla tutustutaan muotoiluun ja sen kysymyksiin suomalaisten klassikkoesineiden avulla. Valittujen tuttujen esineiden avulla innostetaan lapsia tutkimaan omaa ympäristöään


ja suomalaista kulttuuria laajemmin sekä avataan muotoiltujen esineiden maailmaa. Tuntuuko muotoilu alueena kiinnostavalta? Kiinnostaako esineympäristön tutkiminen lapsiryhmässä?

6. Onko Designmuseo teille tuttu? Mitä ajattelette siitä, että Designmuseolla on verkkosivu päiväkotien käyttöön?

7. Voisitko ajatella tulevanne vierailemaan Designmuseossa lapsiryhmien kanssa? Minkä ikäisten lasten kanssa voisitte ajatella vierailua?




## Appendix B



Zipipop

DESIGNMUSEO



# Pienet Löytöretket

Educational workshops for 3 to 6 year-old children in kindergartens

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## Pienet Löytöretket Concept



### What is Pienet Löytöretket about?

**Pienet Löytöretket** is a service that provides kindergarten teachers and educators with high quality audiovisual educational contents produced by Finnish cultural institutions, aimed at kindergarten children in the age group of 3 to 6 years old. The pedagogical and cultural value of the educational contents is guaranteed by the collaborating institutions, who are experts in their own fields.

**Pienet Löytöretket** encourages kindergartens to use computers, digital communication tools and mobile phones in their educational activities, in a safe web environment.

**Pienet Löytöretket** is a new approach to the WebTV concept, relating WebTV to offline learning and to online discussion channels. Educational materials are distributed online, but still a strong emphasis is given to the role of the adults in guiding the children's learning activities.

**Pienet Löytöretket** allows experience sharing and discussion between participating kindergartens, children, parents and the collaborating institutions.

## Pienet Löytöretket Learning by doing and sharing



### What needs can this service attend to?

- Kindergarten teachers and educators would like to find new learning resources to break the kindergarten daily routine and engage children in exciting and meaningful activities.
- Cultural institutions would like to share their contents and services widely, but the access is restricted particularly for pre-school children due to limited resources and distances.

There are many cultural institutions producing workshops directed at children in the 3 to 6 years age group. However, only children in nearby kindergartens can access them. For example, it would be quite challenging for a kindergarten in Lapland to attend workshops happening at Design Museum in Helsinki.

Zipipop proposes that many of these workshops can easily be converted into digital materials to be distributed online under a common platform model: **Pienet Löytöretket**.

By distributing the materials online and enabling kindergarten educators to teach the workshops by themselves it's possible to reach almost every kindergarten in Finland, regardless of their geographical location.

Availability of interesting and relevant services and the possibilities of interaction with peer groups and visibility of work done in kindergartens will encourage the use of the Internet and digital media.

## **Pienet Löytöretket** **Benefits for participants**



### **How will **Pienet Löytöretket** benefit children?**

- Children will gain access to a wider perspective of Finnish culture, art and sciences, and at the same time they will learn about digital media communications.

### **How will **Pienet Löytöretket** benefit kindergarten teachers/educators?**

- Teachers and educators will gain access to a wide variety of prepared materials, videos and step-by-step guidelines of fun and culturally valuable activities to do with the children at the kindergartens.
- Teachers and educators from different kindergartens can share experiences and discuss about their work.

### **How will **Pienet Löytöretket** benefit parents?**

- Kindergartens can share the children's works online with parents, too. This gives parents more information about their children's daily activities, which improves communication between parents and children, and also between parents and kindergarten teachers.

### **How will **Pienet Löytöretket** benefit cultural institutions?**

- A bigger and wider group of people will benefit from educational programmes of cultural institutions.
- The value of cultural institutions and awareness of possibilities of working with them will be distributed widely to people living and working with small children.

## **Pienet Löytöretket** **Description**

### ***How does the service work?***

**Pienet Löytöretket** provides educational contents in different areas that follow the same type, format and structure. There is a special focus on activities, or workshops, that teachers and educators can do together with the children. For each activity there will be a set of:

- Audiovisual materials
- Step-by-step guidelines for teachers
- Photo and video sharing spaces for children's works
- Discussion forums
- In some cases, an extra package of teaching materials can be sent to the kindergartens

Teachers can download the guidelines, watch videos and have discussions with the children, guide them in the suggested tasks and collect photos and videos of the works the children produce to make virtual galleries. Teachers and children together can make online contact with other kindergartens, see their works and discuss about what they did.

Kindergartens can access **Pienet Löytöretket** for free, as long as they have a computer and internet connection.

## **Pienet Löytöretket Innovation**

### **Pienet Löytöretket innovates by:**

- Providing an equal service to every single kindergarten in Finland, regardless of location
- Offering universal access to high quality educational resources from Finnish cultural institutions
- Offering a meaningful reason for kindergartens to start using digital media
- Enabling children living in different places in Finland to share their stories and work
- Giving children access to a wider perspective of Finnish culture, art and sciences
- Providing a direct discussion channel between cultural institutions and kindergartens - teachers and educators and children.

## Pienet Löytöretket *Building a demo*

Producing a first demonstration of the **Pienet Löytöretket** service is essential to test and present the idea to a wider group of potential collaborators, mainly in the cultural and educational fields.

By adding together the work of the three collaborating organizations we will be able to have a fully working demo. Zipipop's work in the production of the demo will consist mainly of designing and implementing the service's online platform. We will do:

- Information architecture design
- Interface and visual design
- Web design
- Web integration with existing services
- User testing
- System management training (for Design Museum)

This is the main work for which Zipipop is applying to AVEK Digidemo grant.

For developing this demo there will be also other contributors:

- Helsinki's Design Museum is providing the first educational contents.
- ConnectedDay is enabling the first sharing and discussion spaces.

**Pienet Löytöretket**  
**Demo funding sources**

*Total funding needed: 42.900,00 €*

**AVEK**

- 20.000,00 €
- Salaries for developing and implementing the **Pienet Löytöretket** platform, done by Zipipop. Costs and production timeline in the next slide.

**Design Museum**

██████████ €

- Adapting existing design workshops aimed at pre-school children into digital format.
- Designing and producing a series of new workshops for the **Pienet Löytöretket**.
- Producing design historical texts and images relating to the workshops for the **Pienet Löytöretket** platform.
- Producing a set of teaching material packages with a study collection of workshop-objects.
- Organising teacher training events and marketing the project in the capital area through a touring exhibition.

**ConnectedDay**

██████████ €

- Access to ConnectedDay service for 12 months for collaborating organizations
- Developing and implementing an interconnection from ConnectedDay service with **Pienet Löytöretket**.
- Communications, travel expenses necessary to develop the project.

**Zipipop**

- 2.000,00 €
- Expenses with office costs: rent, communications, computers and software, necessary to develop the project.



### Pienet Löytöretket Zipipop costs: Platform development

<i>Tasks</i>	<i>Total time</i>	<i>Cost</i>	<i>Production timeline</i>
Project Management	1,5 months	3.000,00€	1.12.2008 to 28.2.2009
Information architecture design	1 week	1.000,00€	1 to 7.12.2008
Interaction design	1 week	1.000,00€	8 to 14.12.2008
Interface design	1 week	1.000,00€	8 to 14.12.2008
Visual design	1 week	1.000,00€	15 to 21.12.2008
Web Design	1 week	1.000,00€	15 to 21.12.2008
Photography	2 days	500,00€	January 2009
Finnish Copywriter	1 week	1.000,00€	5 to 11.1.2009
Flash Elements	1 week	1.000,00€	5 to 11.1.2009
Flash Game	1 week	1.500,00€	12 to 18.01.2009
Technical Implementation	3 weeks	3.000,00€	12.1.2009 to 1.2.2009
User testing	40 hours	1.500,00€	1 to 28.2.2009
Content Management instructions	2 days	500,00€	16 to 17.2.2009
Content Management training	3 x 2hour sessions	500,00€	18 to 28.2.2009
Content Management support	20 hours	1.000,00€	28.2.2009 to 31.12.2009
Web Hosting support and maintenance	12 months	1.500,00€	1.1.2009 to 31.12.2009
Office costs (rent, communications, computers and software)	3 months	2.000,00€	1.12.2008 to 28.2.2009
<b>Total</b>		<b>22.000,00€</b>	

## **Pienet Löytöretket** *Demo functionalities*

The demo will include the complete set of functionalities and elements required to take full advantage of **Pienet Löytöretket** services.

Functionalities for users:

- Download options for media and printable educational materials
- Online stream viewing options for audiovisual media
- Direct links to related media sharing sites (ConnectedDay)
- Virtual galleries with audiovisual samples of the proposed educational activities
- Teachers' discussion forum
- FAQ
- Search fields

Extra functionalities, for content producers:

- Management tools for media and printable materials
- Management tools for the photo and video galleries
- Discussion forum management tools

Other featured elements:

- Calendar with family-friendly events happening at collaborating institutions (using Zipiko)

## **Pienet Löytöretket**

### ***Demo usability and visual styles***

While designing **Pienet Löytöretket** demo we will take into consideration the following aspects:

- Teachers and children use it together
- Attractiveness for children (motivating them to participate)
- Content uploading and managing system easy to use
- Compliance to the most recent web standards
- Accessibility for all level of users
- Easy to modify and customize
- Super simple!

Also, since the puppet Esa is a central element in the workshops, the visual style of **Pienet Löytöretket** demo will be customized to matched its character. Images related to Finnish design will also be used.

## **Pienet Löytöretket**

### ***Demo contents: Esa ja esineet***

The contents of **Pienet Löytöretket** demo will be Design Museum's Esa ja esineet workshops.

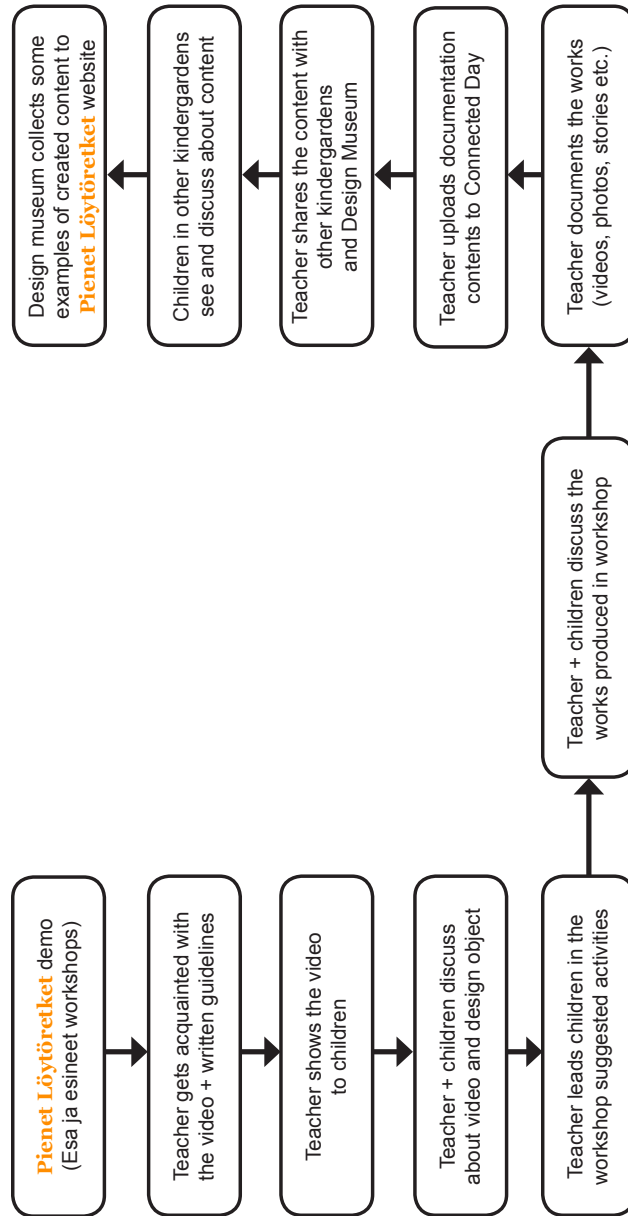
Each of these workshops concentrates on one design object. The selection is made out of Design Museums' collection of Finnish design. Through these objects important topics of design education are introduced to children. Questions on what design is and what we need it for, how design influences our everyday life and what a designer does are answered.

A video featuring puppet boy Esa (interpreted by puppet artist Anna Louhelainen) opens up the discussion and leads the children to study and comment on the design objects. Following the puppet show, discussion continues with the help of various forms of expression. Several activities for the children are suggested.

After a workshop children can distribute pictures or videos of their working results to a common platform and discuss other children's works there. Sharing a platform with another kindergarten creates a new level of visibility to their work. Sadutus (storytelling) will be done based on the working results with children's own teacher and their teacher can also add stories with pictures/videos distributed.

Teachers can download printable guidelines of the workshops from **Pienet Löytöretket**. The guidelines contain all necessary information needed to conduct the discussion and activities with children: fundamental notions about the designer and design history, relevant images.

### Pienet Löytöretket Demo usage diagram



## **Pienet Löytöretket** ***Esa ja esineet workshops background work (by Design Museum)***

In September 2007 Design Museum started a research on methods to discuss design with pre-school children and collect their comments/stories about a selection of objects chosen from Design Museums' collection of Finnish design. This project was made in collaboration with the Media Lab/University of Art and Design, Helsinki.

The project is documented in the blog:

<http://thesecretlifeofobjects.blogspot.com/search/label/Workshops>

Five workshops dealing with design education and media education were produced. The workshops were piloted in two kindergartens in Helsinki, with a group of five-year-olds in November 2007. Kindergarten teachers had very positive reactions to this first version of Esa ja esineet workshops. Several teachers and educators commented they would like to use some similar service in the future.

Based on the good experiences gathered from the pilot workshops, work continues with plans to find a way to share these experiences with kindergartens all over Finland. Making an actual visit to the museum will most likely be a challenge for a group of small children, so taking Esa and his objects to them was a necessity. Children are introduced to several classics of Finnish design and they get more understanding about their surroundings and cultural heritage.

The natural approach to make the workshops accessible to every kindergarten is to find ways that kindergarten teachers can replace the role of the museum educators in conducting the workshop activities. For this reason Design Museum decided to collaborate in the **Pienet Löytöretket** project.

- The project helps kindergartens to benefit of Museum's activities and contents.
- The project helps children explore and enjoy the Museum's collection.
- The project will widen the spectre of people participating in discussions of design.
- Children will add new points of view to Museum's collection.
- The project offers tools for children to study and effect their own environment in the future.

It is important that the Museum is equally available to all kinds of guests.

## **Pienet Löytöretket** ***Future development responsibilities***

**Pienet Löytöretket** platform is designed and implemented by Zipipop, and future developments will be paid for by its client cultural institutions. Accessing the educational contents in **Pienet Löytöretket** is free of charge for kindergartens and other users in general.

Services that Zipipop is responsible for:

- Customization of the **Pienet Löytöretket** platform for each client institution
- Web hosting and maintenance
- Training the client institution's personnel in managing the platform's contents
- Audiovisual content technical production, when requested
- Other technical support to client institutions, when requested

The client institution is responsible for:

- Pedagogical and cultural value of their contents
- Planning and producing audiovisual contents and guidelines for their target audience
- Answering teachers' questions related to the workshops or pedagogical contents
- Managing and adding new contents to their **Pienet Löytöretket** channel

## **Pienet Löytöretket** ***Future range of contents and audiences***

**Pienet Löytöretket** aims to be open to a wide range of contents in the future, produced by many different institutions. How could it be done? For example:

### ***Science centers and museums***

Heureka science center in Helsinki can make videos of their interactive objects and provide kindergarten teachers and educators with guidelines on how they can explain the phenomena to children. There can also be instructions on how to reproduce some simpler phenomena in the classroom.

### ***Cultural centers and museums***

Sida center in Inari can make videos and photos about Sami people, culture and objects; provide guidelines on how teachers or educators can explain Sami history to children and suggestions of activities related to Sami culture and lifestyle that children can participate at kindergartens all over the country.

Note that for example some workshop concepts from the pilot version with Esa and objects can even be applicable for children in the age group of 8 years and beyond.



## Pienet Löytöretket Benchmarking

Similar projects that we are building on:

### **Sadutus**

<http://varttua.stakes.fi/FI/Sisallot/todentuva/tyovalineita/sadutus/Sadutus.htm>

- Method developed by Monika Riihelä in 1980s.
- Sadutus (storytelling) widely used in early childhood education, will be done based on the working results with childrens' own teacher and their teacher can also add stories with pictures/videos distributed.
- This method has been adapted widely in kindergartens and primary schools in Finland.

### **Kasvunkansio**

<http://www.kasvunkansio.fi>

- Kasvunkansio is offering a similar sharing environment as will be used here for kindergartens.
- Research and experiences about their work is useful for us.

### **Mediamuffinssi**

<http://mediamuffinssi.fi>

- Media Muffins aims on improving media skills of children of eight years of age or younger, and to support educators and parents in media education work.

Other educational projects online:

### **Mediakasvatuskeskus Metka**

<http://mediametka.fi>

### **LeMill**

<http://lemill.net>

### **Open museum**

<http://www.avoinmuseo.fi>

**Pienet Löytöretket**  
**Platform development team**



**Diana de Sousa**  
Project Manager

- Diana has a background experience in advertising and new media/graphic design.
- She is also a MA new media student at Taide-teollinen korkeakoulu doing her thesis about WebTV.

**Taro Morimoto**  
Web CTO

- Taro is a programmer with many years of experience in web-based software development.
- He is currently a computer science MA student at Helsinki University.

**Tuomas Laitinen**  
Art Director

- Tuomas is a visual/concept designer with a background in advertising, web/print design, project management and social media development.
- He is currently also a MA new media student at Taide-teollinen korkeakoulu.

Contact person: Diana de Sousa +358 509 200 285  
<http://zipipop.com>

## **Pienet Löytöretket** ***Collaborating organizations***

### **DESIGNMUSEO**

***Leena Svinhufvud***  
Educational Curator

- Leena has worked as researcher, exhibition curator and guide for several institutions, and as lecturer and teacher in art history and textile history; special field Finnish textile art.
- She is currently also an art history Doctoral student in Helsinki University.

***Hanna Kapanen***  
Guide

- Hanna works as a guide in Design Museum Helsinki. She has been involved with several educational projects. She has her background in fine arts, MFA.
- She is currently also MA student in department of Art education, University of Art and Design.

***Anna Louhelainen***  
Puppetry artist, guide

- Anna has a lot of experience in art of puppetry.
- She is currently also working on other production within her puppetry art company called Nukkteatteri Annos.
- She also works as a guide at Design Museum

## **Pienet Löytöretket** **Collaborating organizations**



**Peter Vesterbacka**  
Founder, marketing

- Peter is the founder of ConnectedDay and the father of two. He has been involved in technology marketing and solution creation for many years.
- Peter is also the founder of the global MobileMonday community.

**Meri-Anna Hulkkonen**  
Producer & designer

- Meri-Anna is the producer & designer of the ConnectedDay magazine.
- She is also in charge of the content creation workshops for the ConnectedDay daycare centers.

*thank you!*



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## Appendix C

